A project report on

Virtual Incubator with Ruled Collaborator

Submitted in partial fulfilment of the requirement for the award of the degree of

MASTER OF COMPUTER APPLICATIONS

of

Visvesvaraya Technological University Belgaum, Karnataka

By

GOWTHAMI H.V
1CR18MCA61

Under the guidance of

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CMR INSTITUTE OF TECHNOLOGY
132, IT Park Road, Kundalahalli, Bangalore-560037
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CMR INSTITUTE OF TECHNOLOGY

Department of Master of Computer Applications

Bangalore - 560 037

CERTIFICATE

This is to certify that the project work entitled

Virtual Incubator with Ruled Collaborator

Submitted in partial fulfilment of the requirement for the award of the degree of Master of Computer Applications of the Visvesvaraya Technological University, Belgaum, Karnataka

bonafide work carried out by

Gowthami H.V
1CR18MCA61

during the academic year 2019-2020.

Signature of the Guide	**Signature of the HOD**	**Signature of the Principal**
Dr. A. Abdul Rasheed	**Mrs. Gomathi T**	**Dr. Sanjay Jain**
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Name of the Examiners	Signature with date
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Applying intelligence to make ***technology work***

CERTIFICATE

This is to certify that the project titled "Virtual incubator with ruled collaborator" is submitted to Tangent ProBiz in fulfillment of the requirement for the final semester degree of MCA from CMR Institute of Technology, Bengaluru.

The project is a bona fide record at work carried out by Miss. Gowthami H.V (1CR18MCA61) under the supervision and guidance of Mr. Ganesh D (Team Lead), Tangent ProBiz Bangalore between the periods from 23/12/2019 to 27/5/2020.

The source code of the Project and executable file setup is not issued to the trainee as per the policy of the company.

Thanking You,

For Tangent Pro Biz

TANGENT PRO BIZ
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Mr. Karan Jain

(HR Manager)

DECLARATION

I, **GOWTHAMI H.V,** student of 6th MCA, **CMR Institution of Technology**, bearing the USN **1CR18MCA61**, hereby declare that the project entitled **"Virtual Incubator with Ruled Collaborator"** has been carried out by me under the supervision of External Guide **Mr. Ganesh D**, Project Manager**,** and Internal Guide **Dr. A. Abdul Rasheed**, **Professor, Dept. of Master of Computer Applications** and submitted in the partial fulfillment of the requirements for the award of the Degree of Master of Computer Applications by the **Visvesvaraya Technological University** during the academic year 2019-2020.The reports has not been submitted to any other University or Institute for the award of any degree or certificate.

Place: Bangalore GOWTHAMI H.V

Date: (1CR18MCA61)

ACKNOWLEDGEMENT

I would like to thank all those who are involved in this endeavour for their kind cooperation for its successful completion. At the outset, I wish to express my sincere gratitude to all those people who have helped me to complete this project in an efficient manner.

I offer my special thanks to my external project guide Mr. Ganesh D Project Manager, Tangent ProBiz., Bangalore, and to my Internal Project guide Dr. A. Abdul Rasheed, Department of MCA, CMRIT, Bangalore without whose help and support throughout this project would not have been this success.

I am thankful to Dr.SANJAY JAIN, Principal, CMRIT, Bangalore for his kind support in all respect during my study. Also I would like to thank my HOD Mrs. Gomathi T for supporting completion of this project. I would like to thank Mr. Ganesh D, Project Manager, Tangent ProBiz., Bangalore, who gave opportunity to do this project at an extreme organization Most of all and more than ever, I would like to thanks my family members for their warmness, support, encouragement, kindness and patience. I am really thankful to all my friends who always advised and motivated me throughout the course.

GOWTHAMI H.V
(1CR18MCA61)

1. Introduction

1.1 Project Description

Business entity requires distinctive approach to perform various technical workability based on various types of Technologies in regards to the client so the system is been produced with the intention of relational initialization of different processes from a single place. The system is included with a manage account provision so that the users can frame their own work considerations in flexible manner. The system is intended to provide all types of technological venture perceptions with the related workflow, planning, initializations, work directives, resources, interactions, tracking etc. When multiple perceptions are provided with different desired settings all types of perceptions that are required for the overall commencement will be executed in a proper structured format.

When the companies will utilize the system they will be having multiple choices so that all types of project perceptions can be initialized exactly in the way it is required and even multiple considerations can be set up at the same time. The Technologies compatibility is also taken into consideration as the project that will be undertaken onto the platform requires multiple lateral and direct Incorporation of various types of technologies. Allassociations can be produced from the single system and it can be process to with proper security formations with all particulars provided for the setup. The Incorporation of different reforms which will be based directly can be parallel organized which makes the work more systematic and synchronized.

As any type of working requires an associated workspace the system also includes designing of a specified workspace according to the operations. All types of practice required to achieve project goals associated are provided. The references of decision making can also be undertaken with the help of the system as it is provided for associated working which is required to handle multiple tasks related to a particular associated with the client. The Systematic workability is also associated with the templates usage which is included to associate the work in more understandable way. Any type of work that will be associated will be guide and if more references are required temporary and inbuilt pamphlets can be utilized for the understanding.

All the technological working that is associated with the system requires a proper information transfer in terms of the working progress for which the system is intended to provide all types of references with multiple categories. The categories associated in such a way that it can be modified according to the requirements in the required information can be tracked as multiple workspaces will be produced at the same time and will be prepared in such a way that it is associated with the particular project. The central frame which is provided is in such a way that it can be governed by the administrator so any type of perception that is included is required to be set up first it is in relation to the space definition for allocation of the resources and even the user integrations.

All types of information will be produced with different types of graphic formations which indeed will be easier for the users to understand and acknowledge. The redefining can also be organized where individual workspace will be having all types of options present so that a group of users are located with that particular workspace can use that particular working space for work. Large business activities will be produced very quiet associated in a way that all primary budget that is required can be maintained the reason why the system will be associated in such a way according to the work considerations the activities can be selected and in reference to which it would be chargeable by the provider.

To make the work more influential multiple team guidance provision is provided where the team managers will be having the rights to manage a particular workspace or to manage particular group of user's show multiple groups and multiple workspaces can design at the same time. The project approach that will be required to undertake is based on different types ofwork labels and each work level is based home different perceptions so the system is designed in a way that from the requirement gathering to the implementation the system provided can be utilized. Multiple notification options are also included which will be listed in such a way that all considerations can be notified to the users and even the work notifications can be provided automatically by the system to achieve a systematic working.

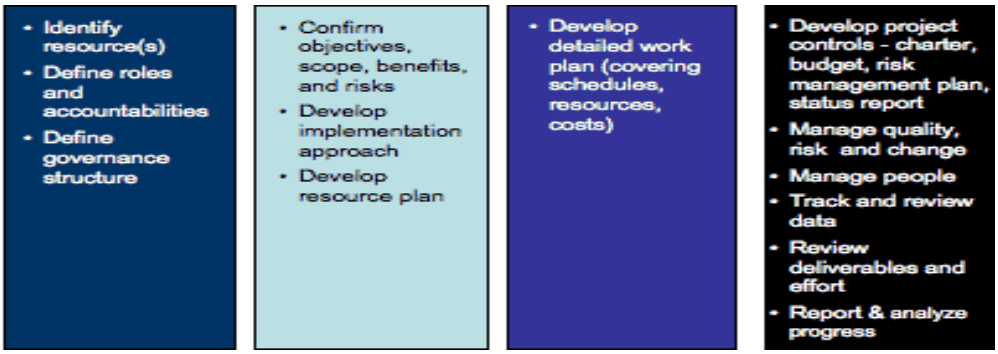


Figure-1 **<u>The above diagram shows the reference of work identification</u>**

Visibility of different operated approaches from a single system will provide the uses with the contrast of work so that all distinctive technical skills in management strategies can be implemented. System will also provide visual incorporation where each task that is presented can be viewed with graphical popup graph to get knowledge of exact word provision that is undertaken at a particular time. The system will also establish different types off descriptive associated documents which can be associated directly or in terms of self-design.

1.2 Company Profile

Built up in 2010 all the related operational innovative work administrations are given the different associations. The related ability will assist the customers with associating the need it incorporated work excellences as per the redid necessities concerning each customer related prerequisite investigation with related research procedure for execution is arranged so a very much characterized program point of view can be given. The whole innovative base is incorporated for the necessary advancement and examination as related view of the customer's prerequisite taken so that upgraded work administrations can be given.

The organization gives various stage based business arrangements to the customers including various areas from account to the advancement associations with the goal that a working can be more improved in differential working. The Global nearness and the required conceptualization usage to accomplish the objective will help the association the objective more customers

Figure-2 <u>The above diagram shows the Offshore Product Development Process</u>

The main working choices in terms of the association is listed below-
Business Optimization
Facilitating arrangements gave
Portable application administration
Digitalization
Generation observing
Monetary counseling
Online business stage outline
Application advancement
Rebuilding exercises
Examination progressively will be embraced

2. Literature Survey

2.1 Existing System

In the existing system the distinctive technical skills and management strategies for different project approach is required to be associated with multiple users and components making it too complicated for the companies to organize it. We have included various types of technological firms and Companies to associate the type of problems their facing and we found that multiple constraints in relation to synchronization, costing, space allocation, resource allocation, report understanding, quality etc. are being acknowledged. That this system is quite self-governed so various inclusions are required making it more costly.

Some of the references in terms of the problems that are discussed are listed as follows-

- The most important problem that has been associated with multiple ventures are undertaken is aligning the task and responsibilities for different types of processes that are required to be included for that particular project.
- In the existing system even resource usage are based on individual processes for different types of projects making which very much expensive for the organizations as the larger organizations are undertaking different types of working perceptions at the same time.
- In the existing system even the automated scheduling for the objectified working is not support it so handling different types of venture related processes is quite difficult to schedule.
- As the multiple identities are related for the projects it is also required that it have to be associated with proper tracking so that real time information different perception can be generated for the proper control but in the existing system it is quite difficult.
- Activities requires synchronization or we can say that all the processes that are undertaken for a particular project is associated with one another it is very much difficult to maintain the real time synchronization between the processes in the existing system.
- All the venture that are undertaken is also associated with the information flow and other level wise planning and decision making in the existing system even these activities are maintained individually making it elaborate.
- The visualizations that are required according to the filters is also not supported in the existing system the individualized information tracking is not possible.
- The security that is needed for the access and for the documents related to the ventures are also quite difficult to arrange in manage as we have discussed with the client they are more concerned with the data security.
- The resources that are required for defined technical skills orientation is also quite difficult to configure and manage existing system as various types of configurations are required and even it is costly.

2.2 Proposed System

The proposed system is accompanied with different types of Administrative Services that can be utilized by multiple types of technological organizations for undertaking technological profound ventures. Each type of processes related to a particular venture and for a particular venture will be provided with associated usage of multiple space system which is also included. All projections that we have discussed above as problems in the existing system are being eliminated in the proposed system.

Some of the important formations of the proposed system is listed as following-

- In the proposed system of central alignment system is provided so that all types of responsibilities in task that is associated with a particular project can be governed and established.
- The usage of the resources are provided in integrated format where for every process perception the required tools can be utilized with required definitions which will be very much helpful . All the activities and processes can be organized from a single workspace according to the setup that will be done by the administrator
- The Awareness of different types of activities and schedules that are required to be maintained is also associated with a detailed schedule system with automation setups. Proposed system maintains different types of scheduling and notification system. Each identity that is integrated onto the system will be notified for all types of work that is been allocated or for different types of work related information
- Information control system is also included in the proposed system to get the real thank perception with mathematical calculations and graph this will help to understand the working progress properly
- All the process that will be undertaken within the platform will be synchronized as it is very much important to maintain the association between different processes
- All types of decision making and venture level wise planning is also supported so we can say that in propose system all level of work perceptions are supported
- Multiple types of visual filters also provide it so that individualized information tracking can be maintained
- All types of security concerns acknowledged and properly provided with custom it is based on use of perception accessibility for the related venture document management. All types of working data is automatically stored and is provided in a way that all guided recovery is also associated.
- Different types of skills can we managed parallel as various space structuring is provided which will be maintained with individual options and working rules.

2.3 Feasibility Study

Feasibility study is being incorporated to understand the visibility of different restructuring which is associated with the particular project that has been proposed for example that for designing the project what all financial needs will arise and how it will be fulfilled in the same regards all types of operational requirements which will be associated with the project will be undertaken and in the same way different types of technological requirements for the design and implementation of the system will be also organized and understood.

- Financial Feasibility
- Operational Feasibility
- Technical Feasibility

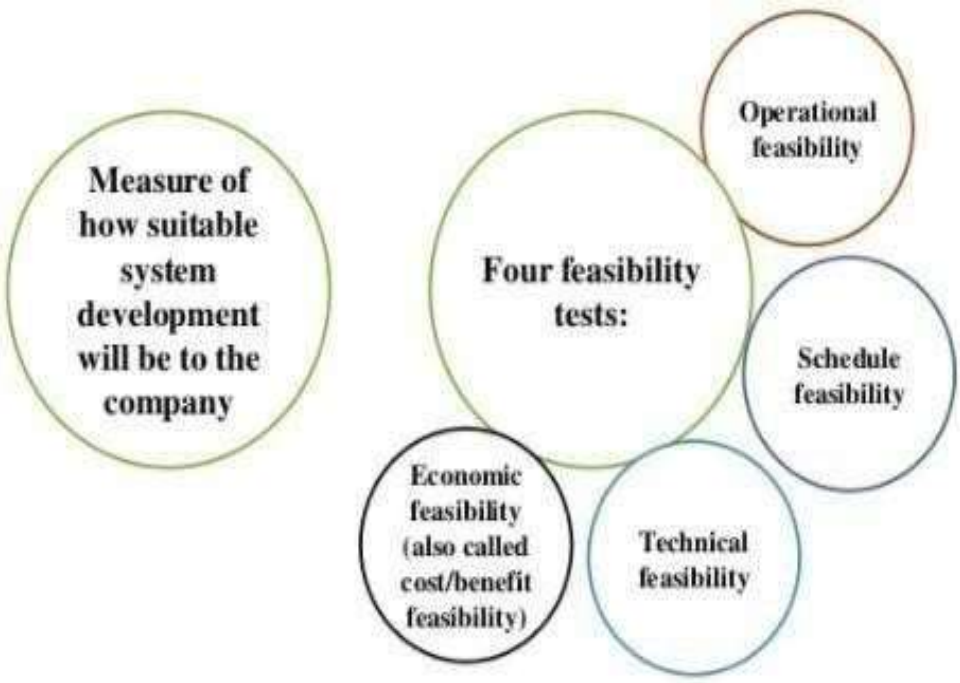


Figure-3 <u>The above diagram shows the feasibility details that will be undertaken</u>

1. <u>Financial Feasibility</u>

Financial feasibility is required to undertake all consideration which is associated with the aspects of money where it has to be properly planned that how the money required for the project orientation will be received.

Different types of situations that will arise will be also discussed as in times adverse scenarios can arise.

All types of financial requirements will be properly decided and will be even documented so that each aspect can be understood.

2. **Operational Feasibility**

Operational understanding is required to be achieved so in terms of working a proper detailed training will be provided so that users can understand the definitions of space design and other provisional working that is provided within the system.

The usability of the operations will be provided in such a way that more clients can be associated with the project and they can have the detail understanding.

All types of operational reference will be guided and will be documented for multi theme synchronization and workability.

3. **Technical Feasibility**

Technical associations are based on the definition of environment design where multiple stated process environments will be designed related to the ventures that will be undertaken.

For multiple ventures different types of environment creation with different perceptions of work design will be checked for the accuracy.

The substantial usage of the information which will be provided by the system in the form of different types of filter will be also acknowledge for the accuracy.

The compatibility in terms of processor resources that are incorporated and it will be used by different types of clients at the same time will be also checked as multiple references will be utilized at the same time.

2.4 Tools and Technologies Used

Java

We will utilize different editors for Java that is accessible for instance Net Beans and Eclipse. Some noteworthy utilization of Java is that it is having meaning healthy faultlessness that suggests it is reliable as it can manage different sorts of uncommon case dealing with, memory portions, and waste social event.

Java has been configuration by sun microsystems to give the necessary adaptability and furthermore it gives stage autonomous byte codes. Java is a made sure about language which will utilize different open keys for the refreshed security arrangement.

My SQL

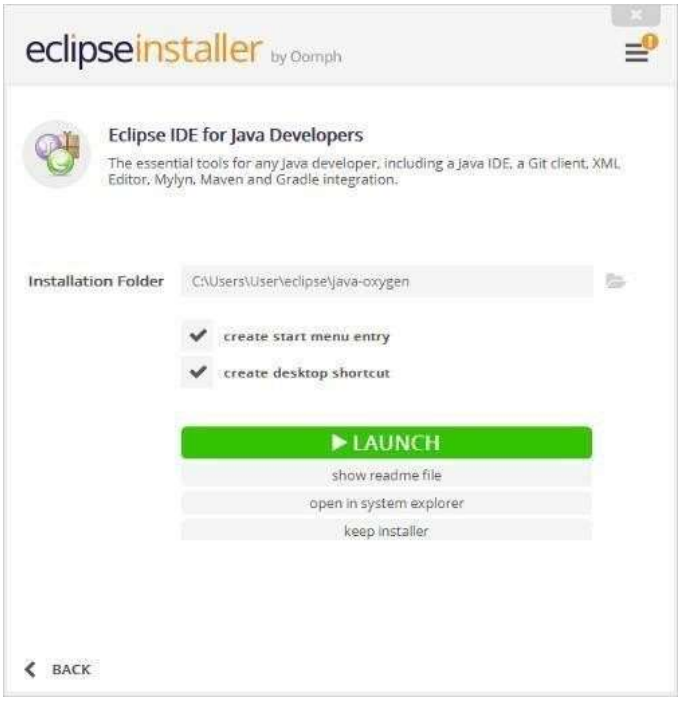
My SQL is promoted in supported by My SQL which is a Swedish association, and different assortments are given by MySQL to point of reference.

- ✓ It is the most predominant database group and huge subsets of the functionalities can be properly sifted through.
- ✓ It is an open source grant based working.
- ✓ It will be versatile.
- ✓ MySQL works on many working structures and it support different lingos for example Java PHP, etc.

Installation

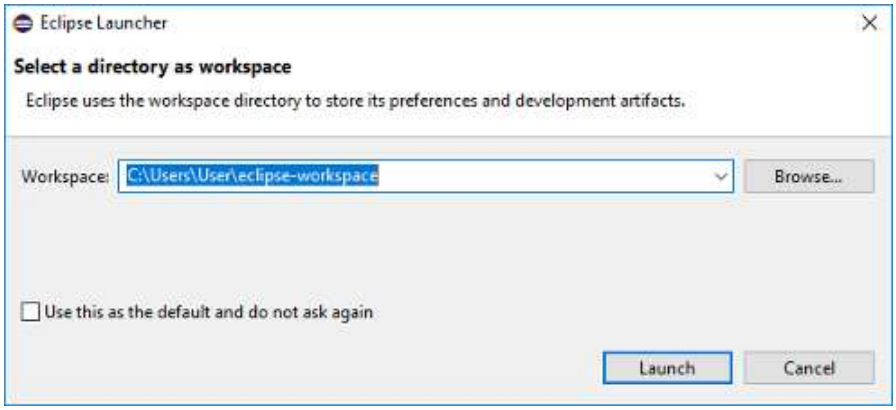
1. Run the Eclipse installer.

2. Click the "Launch" button.

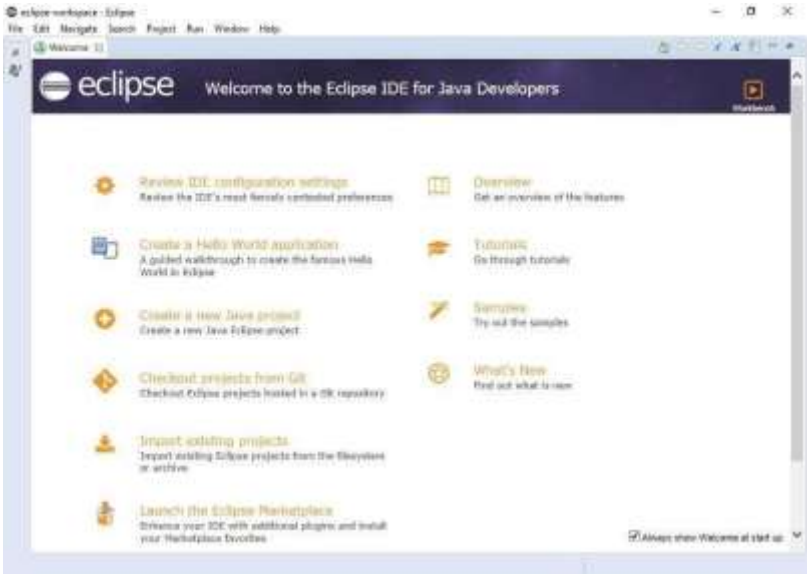


Configuration

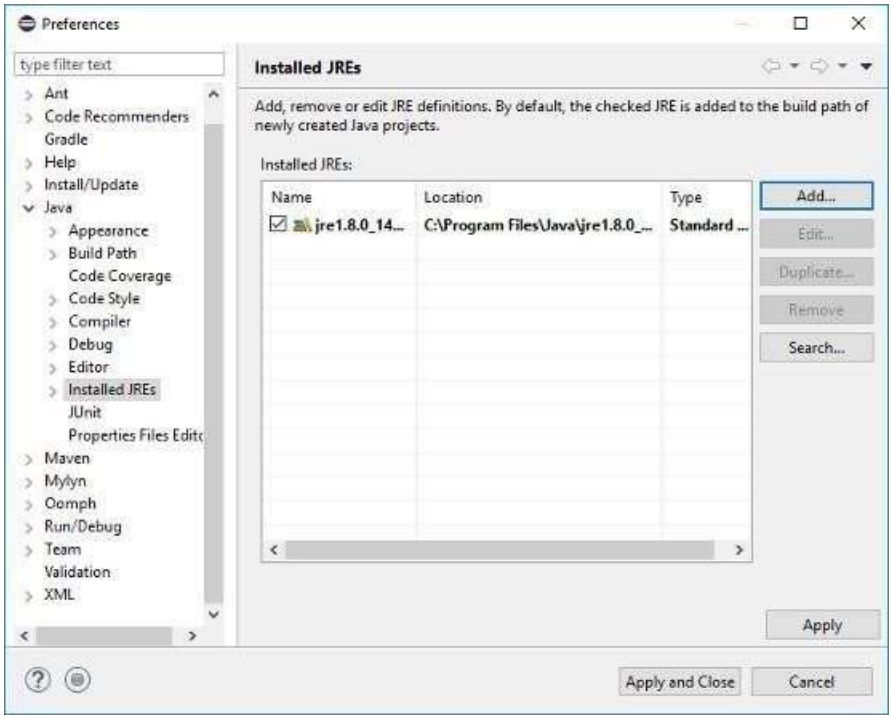
1. Run Eclipse.



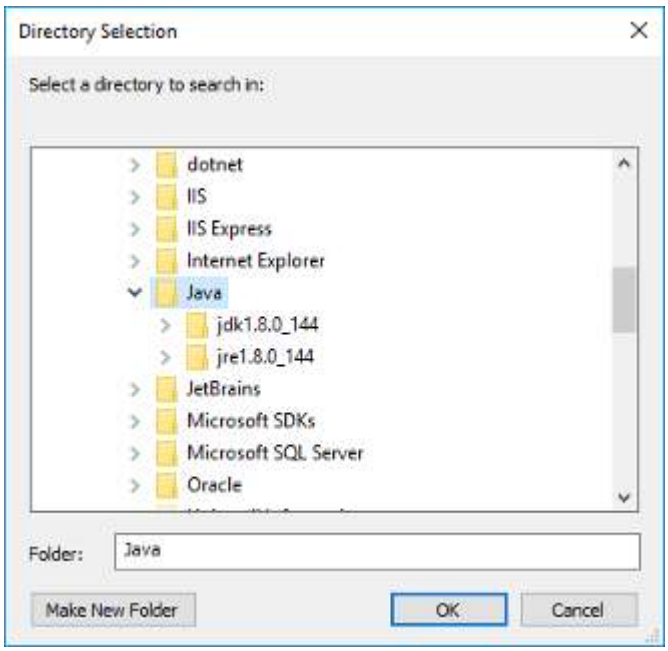
2. Open the regular editor.



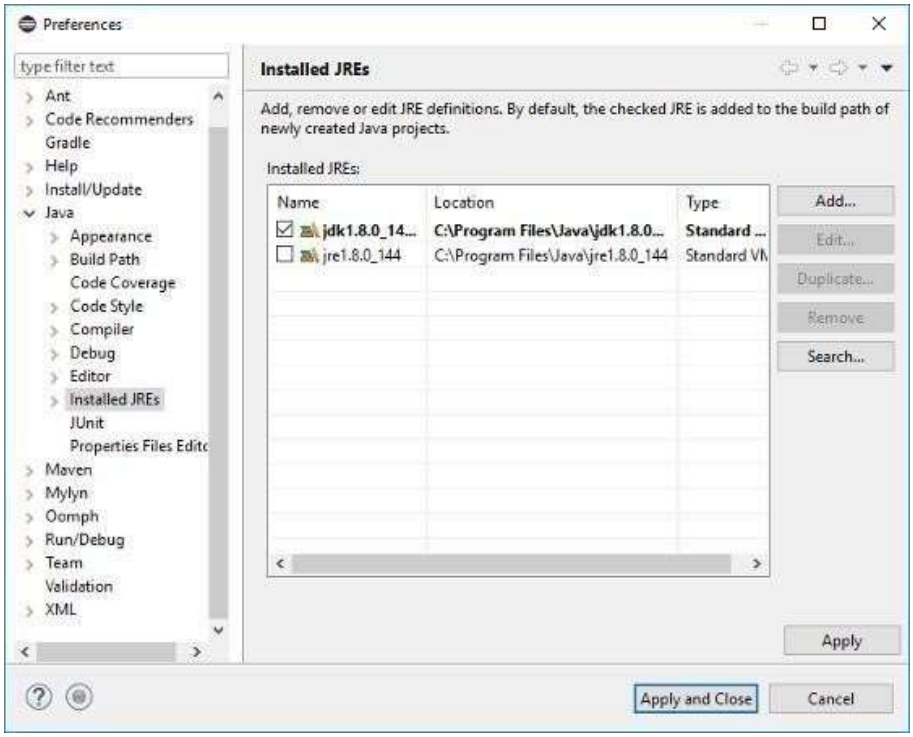
3. Select "Java > Installed JREs.



4. Click the "Search" button and select the "Java" folder.
    - Windows: C:\Program Files\Java



5. Select the line for the JDK:



6. Click the "Apply and close" button.

2.5 Hardware and Software Requirements

Software Requirements

- Databases **:** MySQL 8.0.13
- Technology **:** Hybrid cloud (implementation)
- Platform **:** Windows
- Languages **:** JAVA (J2EE, JavaScript, JSP)
- Integrated Development Environment **:** NetBeans/ Eclipse
- Supporting Server **:** Apache Tomcat 8, SSD cloud server, Amazon s3

Hardware Requirements

- Computer processor : 4th generation Intel core i3
- Clock speed : 1.7 GHz
- Hard Disk Space : 500 GB
- RAM : 4 GB

3. Software Requirement Specification

3.1 Functional Requirements

The requirements acknowledging different aspects of Ventures will be documented and produced with categorical information based on the inputs, processes, different types of triggers and output data required.

Frame Area Selection

Use Case Name	Frame area selection
Trigger	Setups
Precondition	Admin association required
Process	Frame area selection provided with the help of manage option where multiple frames can be added and for each frame guided options will be provided to the administrative so that according to the process that has to be undertaken while using that particular area can be design. Each area that will be selected will be handled individually in terms of working guidelines, users associated with that particular work and other provisions of resources that will be utilized for conducting the particular process related to the venture. Each setup will be promoted by the administrator and accordingly processed
Post-condition	Added with definitions

Revising Templates

Use Case Name	Revising templates
Trigger	Selective
Precondition	Space defined
Process	Revising templates will be provided for the usage and working where for each space and process the system will highlight the working consideration examples which are inbuilt. The users can utilize these revising templates which will be associated for the individualization of the activity reference and even can be modified and used if required
Post-condition	Modification and usage provided

Structuring Information

Use Case Name	Structuring information
Trigger	Selective
Precondition	Space working intended
Process	Structuring information option will be associated in such a way any type of process working information can be substantially tracked by the authenticated user where different filters will be utilized. All the information will be produced as the collected provisions are Input and in reference to which the statistics will be promoted even the system uses mathematical percentage report to get exact information about the work done
Post-condition	Information seen

Business Data

Use Case Name	business data
Trigger	Selections
Precondition	Working setups added
Process	The space that is associated will be designed for even the related business data management where the consideration security can be provided and as the security and access provisions are provided the system will save the settings and accordingly the working rights will be associated and even the data management regulations will be promoted. All types of data will be governed on the cloud making it more accessible to the company as virtual working can be Incorporated
Post-condition	Defined data management seen

Required Technologies

Use Case Name	required Technologies
Trigger	Rights required
Precondition	Access granted
Process	The required Technologies which are associated for undertaking the processes are also accessible according to the conditions that will be set by the administrator only and if the identity is having the access right the related Technologies can be utilized. The system will provide all types of technological compatibility and usability on a central platform.
Post-condition	Added and used

3.2 Non-Functional Requirements

The category of the requirements which has to be promoted for maintaining the service quality is the nonfunctional requirements where we have to discuss all types of maintainability that will be provided, scalability, documentations etc.

Functional Requirements	Non Functional Requirements
• Product features	• Product property
• Describe the actions with which the user work is concerned	• Describe the experience of the user while doing the work
• A functions that can be captured in use cases	• Non-functional requirements are global constraints on a software system that results in development costs, operational costs
• A behaviors that can be analyzed by drawing sequence diagrams, state charts, etc	• Often known as software qualities
• Can be traced to individual set of a program	• Usually cannot be implemented in a single module of a program

Figure -4

The above table shows the differences between the functional and nonfunctional Requirements

- **Operational Ability**

  To perform different types of operations single system it will be more helpful to the clients as they will be having a sense of security and work Optimization, show with the help of the system multiple integrated operations performed from a single system making it useful for acknowledging the type of work requirements according to the business requirements of a particular.

- **Robust**

  All working will be robust number as required that the conditional associations of the settings will be provided in such a way that system can provide the related working aspects to the users when they will be using the system in a customized way. The users will be provided with various types of notifications and usability conciliation.

- **Documents**

  Documents are important and it will be associated in such a way that all types of perception can be handled with effect where uh whenever any type of working problem arises by users can have the solution. Documents will be provided in a guided format with automated pop ups and even in reference to the self-access from the document database.

- **Compliance**

  The usability and compliance will be associated in such a way that any type of understanding in terms of working regulations can be provided to the users so that they can work with requires consideration and work acknowledgements. When property compliances are written it will be helpful to manage the escalation.

- **Security**

  All types of security provisions for the access control also associated so that as required the companies can set up their own security as when multiple ventures will be undertaken the security perceptions will be different from one process to another and even from one team to another team. Security setups for automated data synchronization will be also provided.

4. System Design

4.1 System Perspective

Architecture Diagram

Architecture diagram shows the structure of component interrelationships and the principles so that reflection understanding how the system working can be achieved.

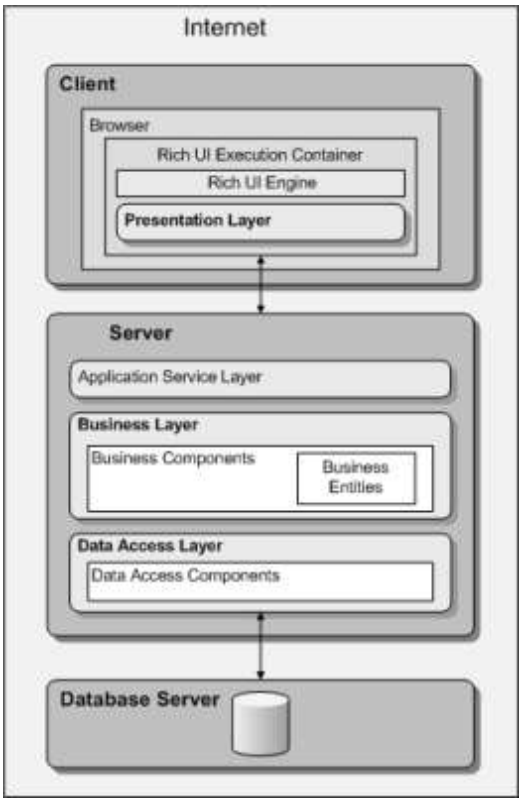


Figure-5 **The above diagram represents Architecture Diagram**

4.2 Context Diagram

Context diagram shows the information at a glance which includes all the scope and boundaries of the system. Context diagram easy to draw and no technical knowledge is assumed while designing it.

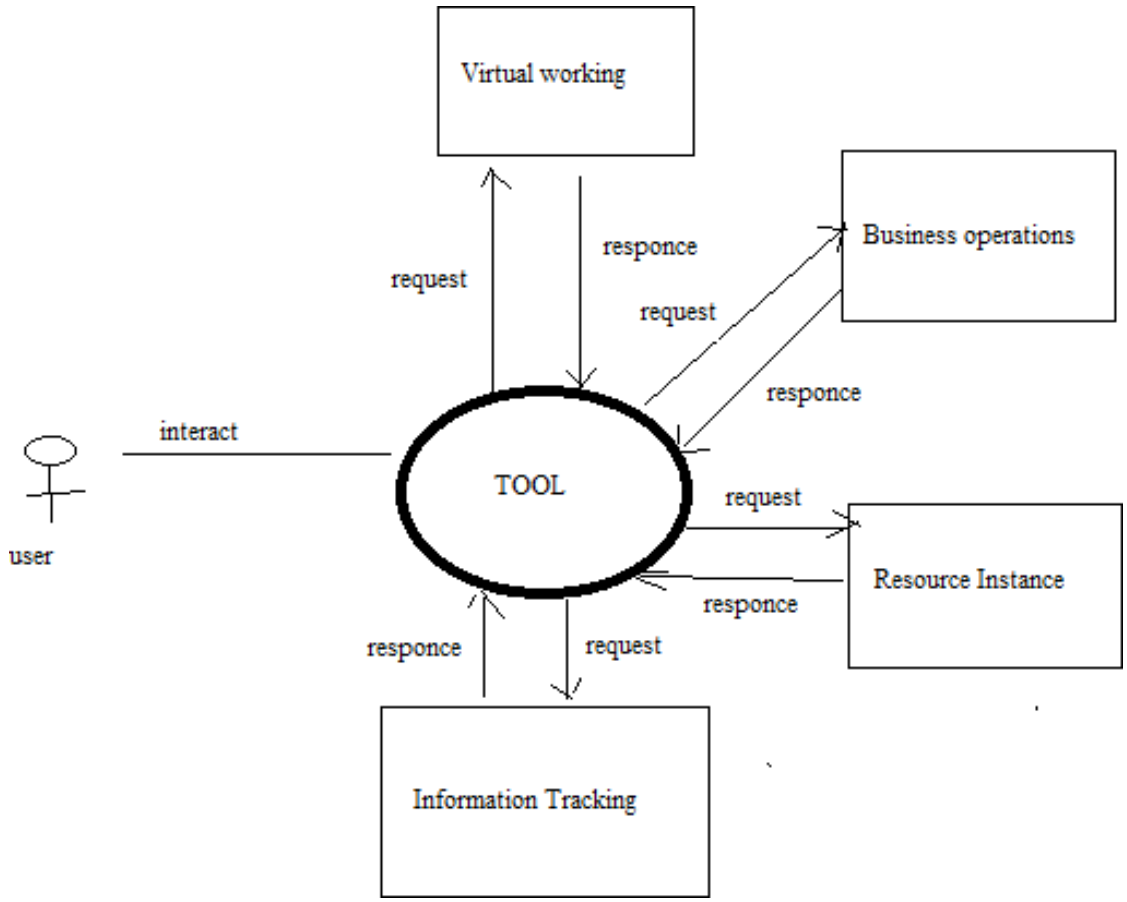
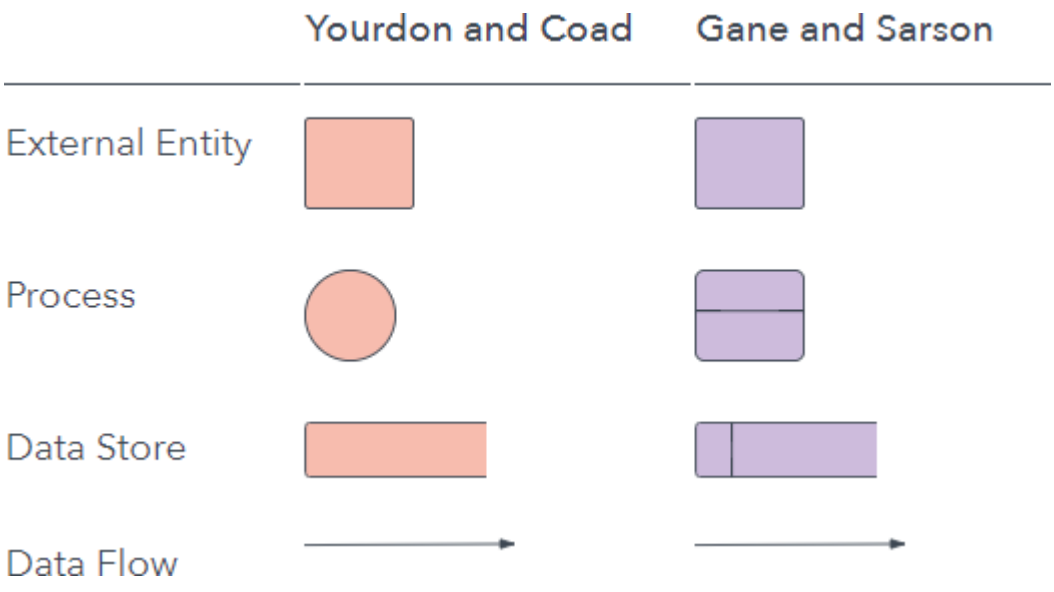


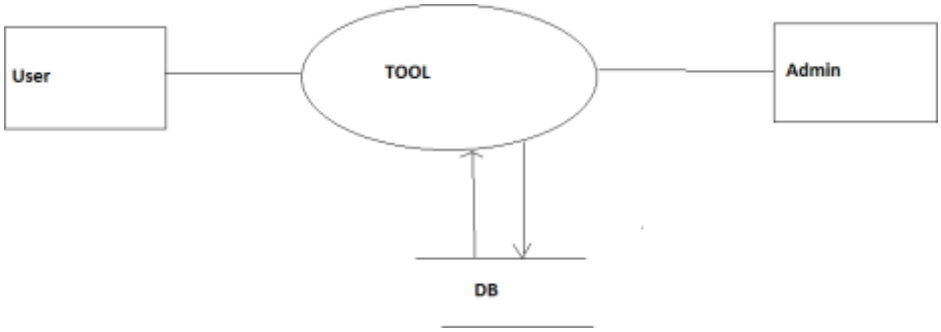
Figure-6 **The above diagram describes the context diagram of the system.**

It shows the when user interacts with system using tool, thereby tool interacts with the components of the system such as virtual working, business operations, resource instance, information tracking using request and response type and gives the expected result to the user.

4.3 Data Flow Diagrams

The information flow for different types of identities where the outputs and inputs are required to be established is done with the help of data flow diagram.





DFD Diagram

Basically the above diagram shows the flow of data from one page to another example, when user login to tool as admin it checks in database whether the user has given admin credentials or not if provided control goes to admin page.

Data Flow Diagram for Admin

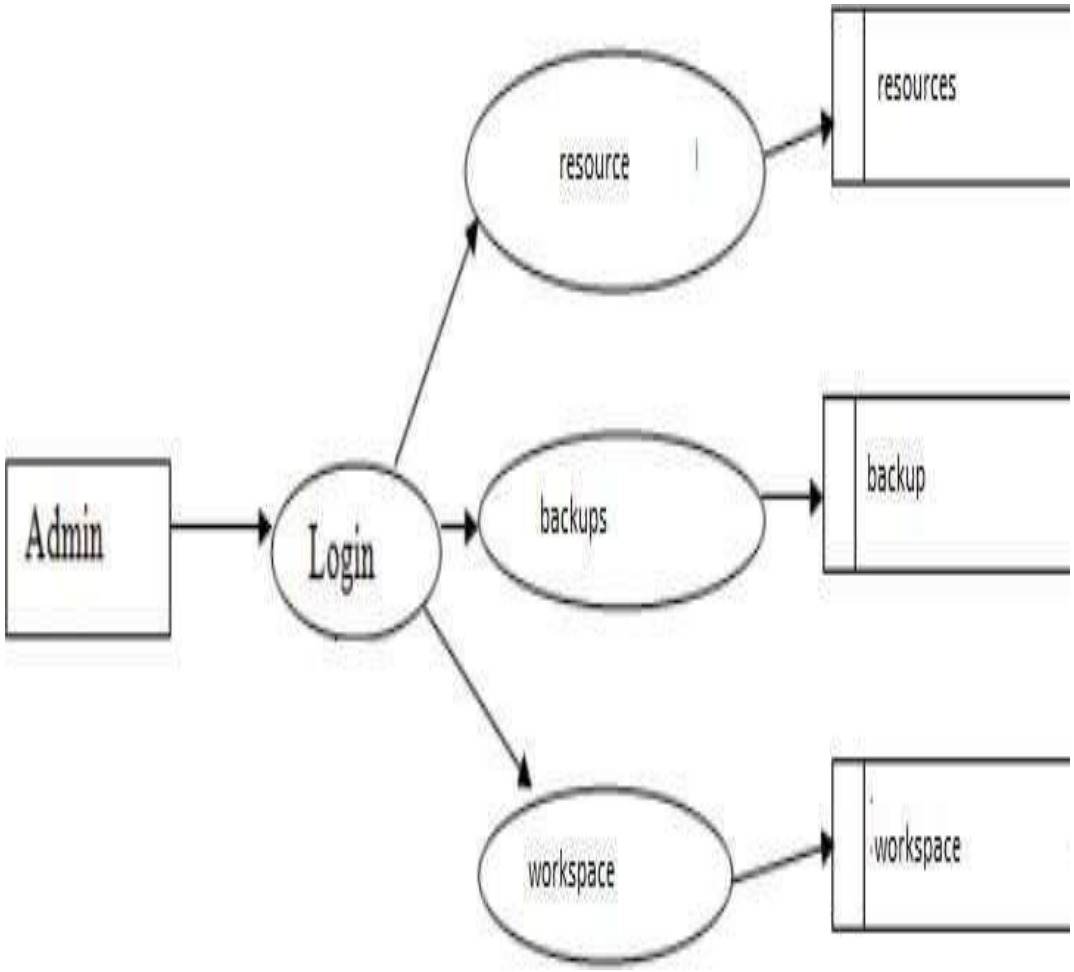


Figure-7 **The above diagram shows the data flow diagram for admin**

Whenever admin login they can able to see the resources are being used by organization, have a look at backups and provide workspace to employees

Data Flow Diagram for User

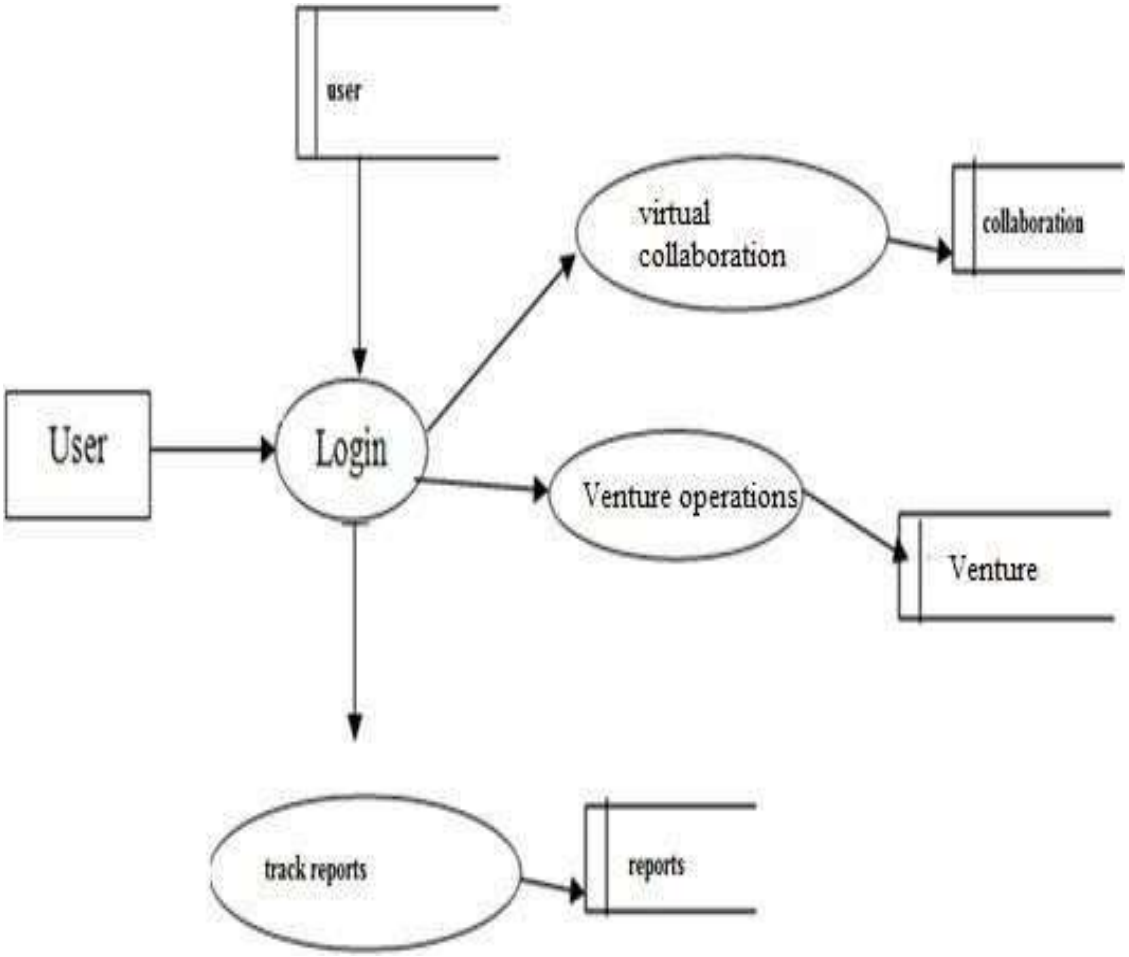
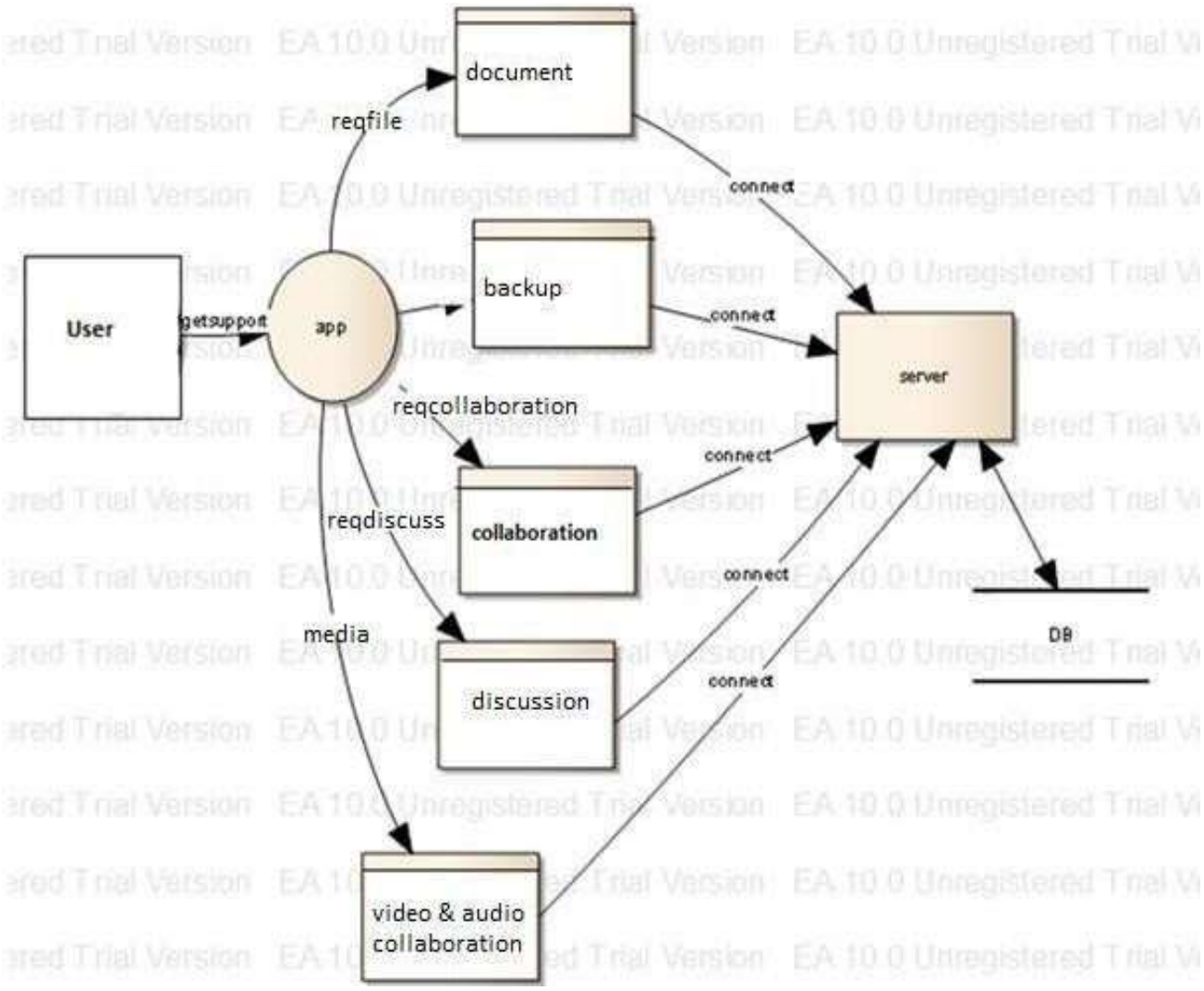


Figure-8 **The above diagram shows the data flow diagram for user**

After user logs into system he can track the reports, able to access the venture operations and do virtual collaborations

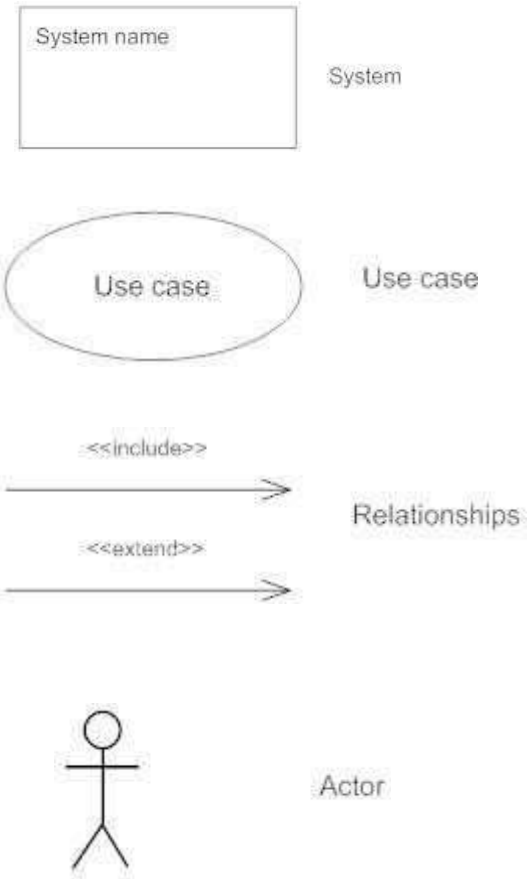


When login success to user he will get support to app where they get access to documents, backup, collaboration, discussion and video & audio collaboration these are all connect to server which connected to DB.

5. Detailed Design

5.1 Use Case Diagrams

Use case diagram shows all types of interactions and relationships between the user and different types of use cases where the user is involved for the referential usage.



The above diagrams represents the meaning of symbols

1. Square shape represents the System name.
2. Oval shape represents the Use case.
3. Arrows represents the relationships (<<include>>, <<extend>>)
4. A human like symbol represents the User.

5.1.2 Use Case Diagram for Virtual Incubator with Ruled Collaborator

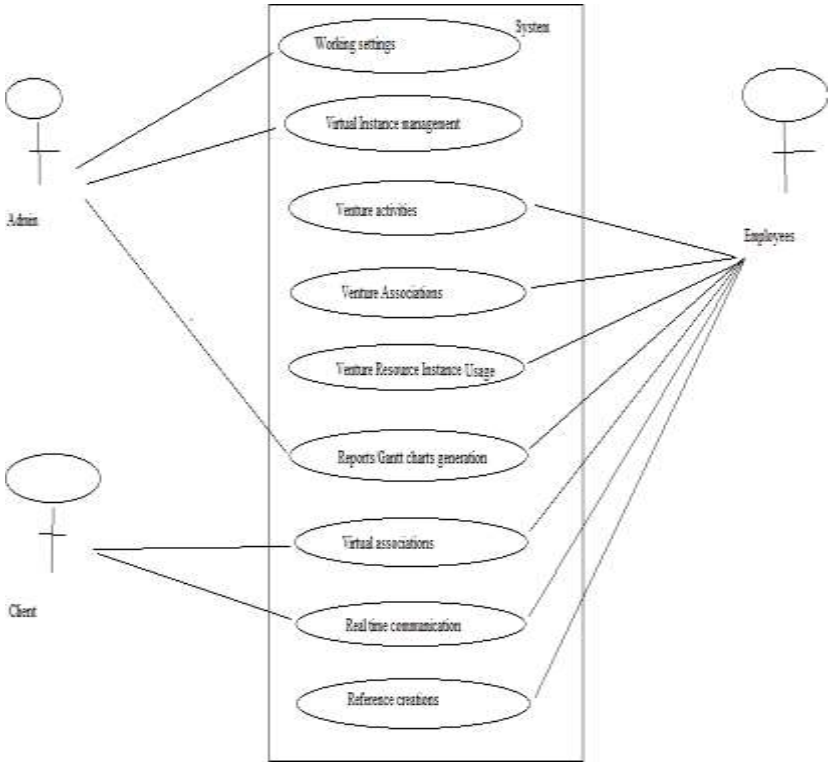


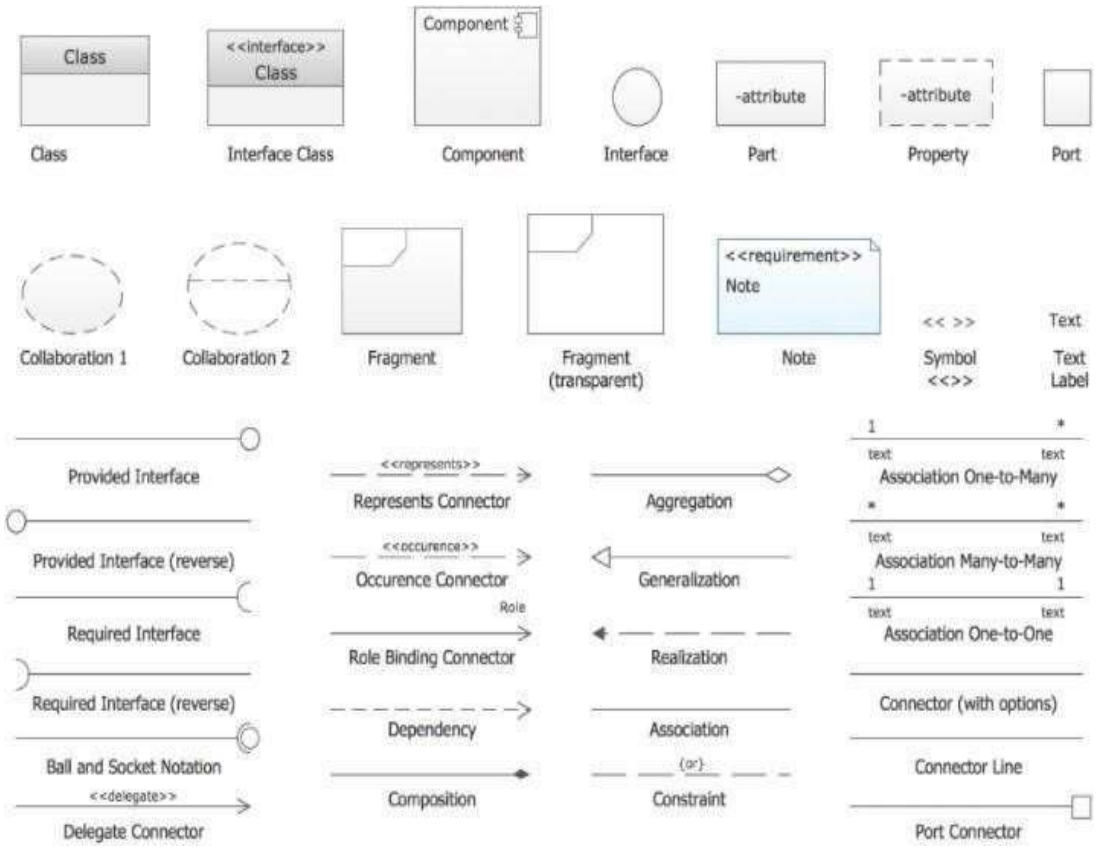
Figure-9

The above diagram describes the Use case diagram, it contains three actors Admin, Client and Employee.

- ✓ Admin is given permission to do working Settings, Virtual instance management and report Gantt chart generation.
- ✓ Client is given access to virtual associations and real time associations.
- ✓ Employees have been given a permission to venture activities, venture associations, venture resource instance usage, reports Gantt charts generation, virtual associations, real time communications, reference creations

5.2 Class Diagram

Class diagram shows the system classes' attributes and operations and different types of relationship among objects.



The above diagram represents the meaning of symbols like class, interface class, component, interface, property, port, fragment, note, collaboration 1, collaboration 2, part and etc.

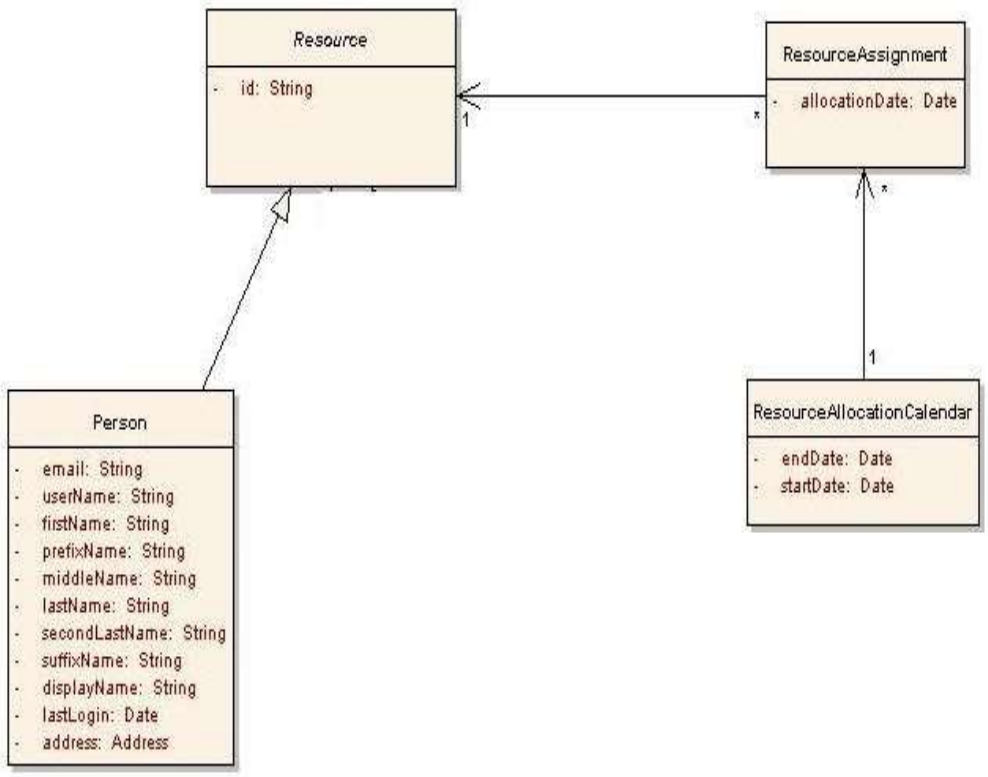


Figure-10

In the above diagram there are four classes connected each other 1 to *

- Resource is a class it contains an attribute called id which is of String type
- ResourceAssignment is an another class which has allocationDate it is of type Date
- Person is third class which has multiple attributes for ex, email is of type String, username is of type String etc.
- ResourceAllocationCalender is the last class which contains endDate and startDate as attributes those are of type Date

5.2.1 Class Diagram for Time Tracking

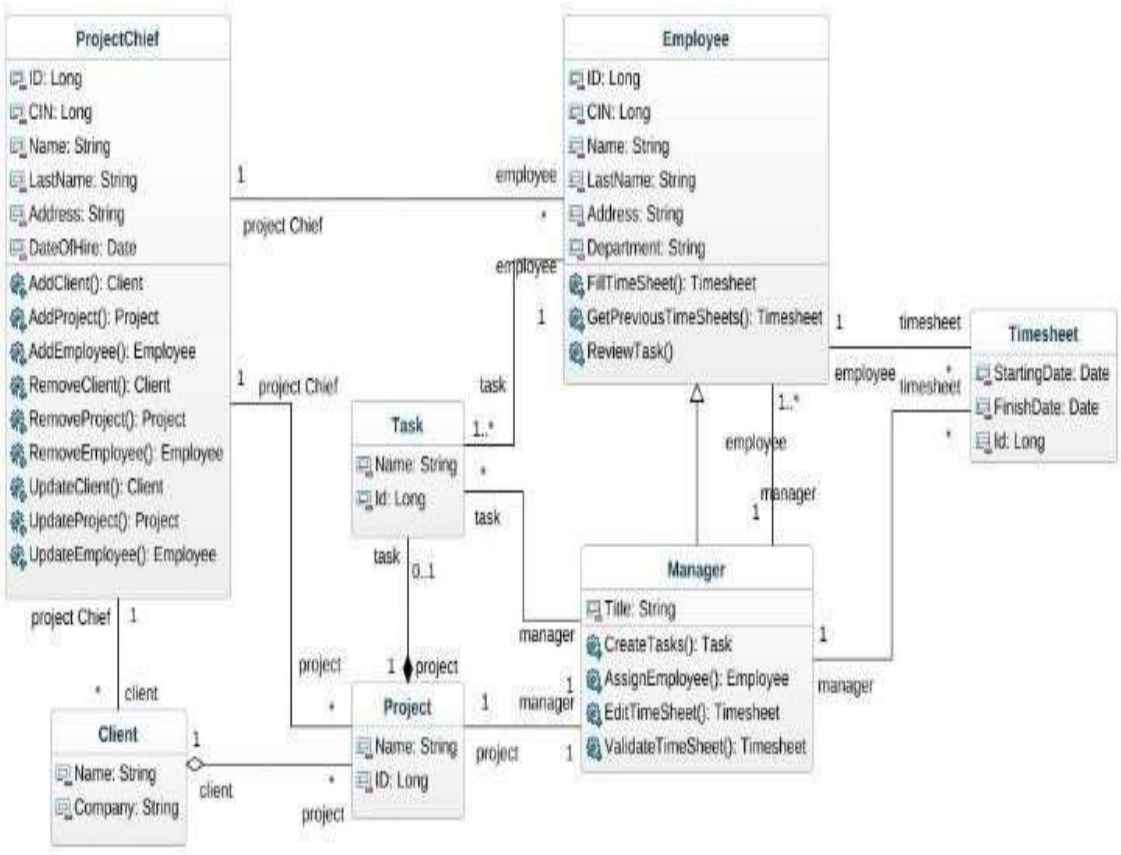
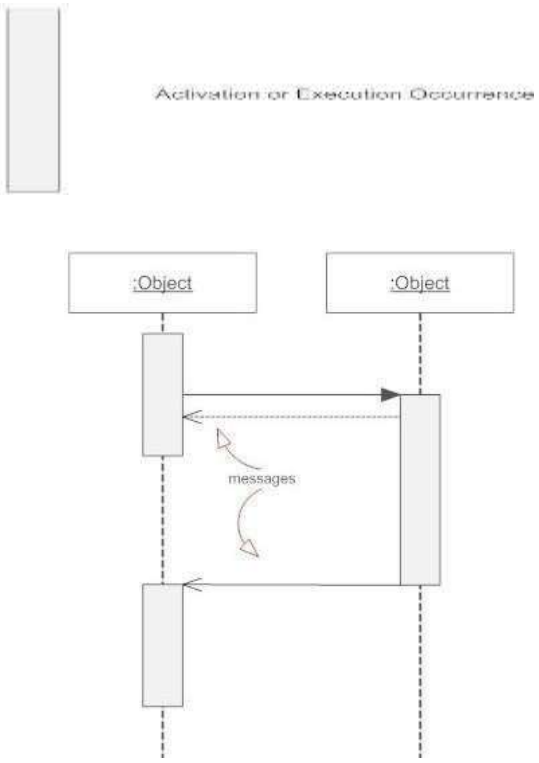


Figure-11

Above is the class diagram for Time tracking in this Project Chief, Employee, Client, project, Manager, Task and Timesheet are the Classes these contains attributes and methods which specifies what it has and what it does.

5.3 Sequence Diagram

Sequence diagram shows the related external actors and the related methods invoked by these actors.



It is a sequence diagrams' components which shows the activation or execution occurrence and objects which are connected using arrow marks and shares the message between them after execution.

5.3.1 Sequence Diagram for Admin

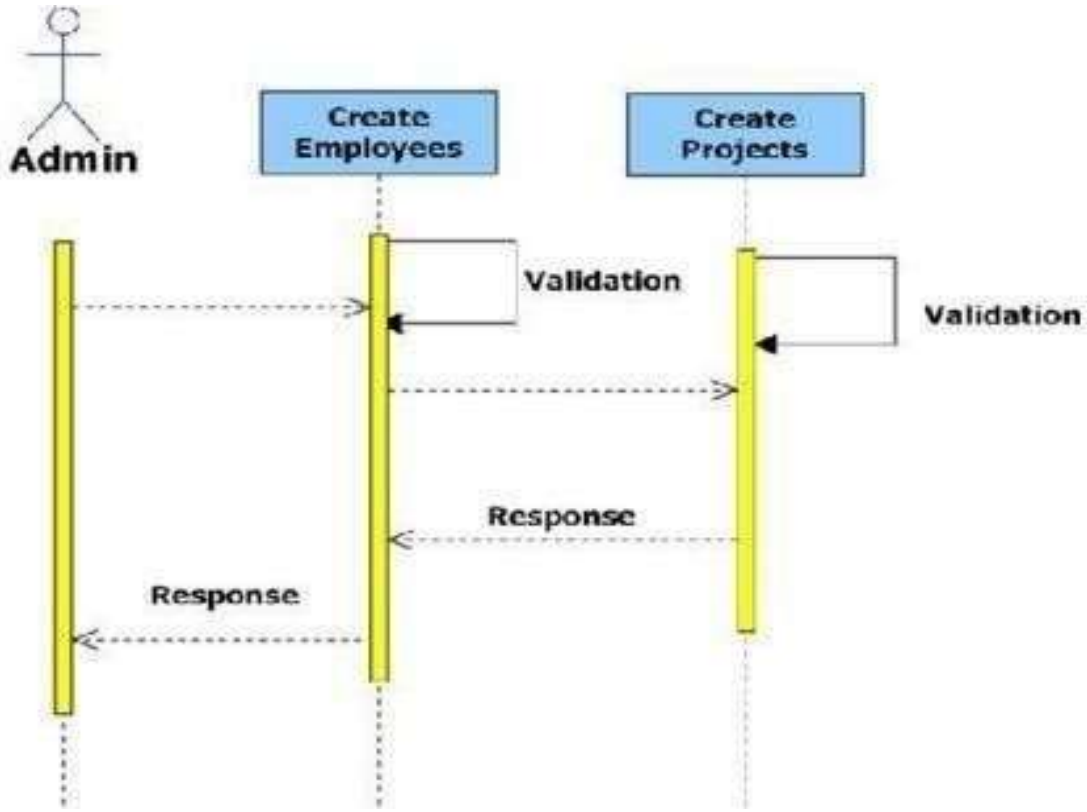


Figure-12

Where Admin is an actor, create employees and create projects are objects which are on activation does the validation and provide response to the user.

5.3.2 Sequence Diagram for User

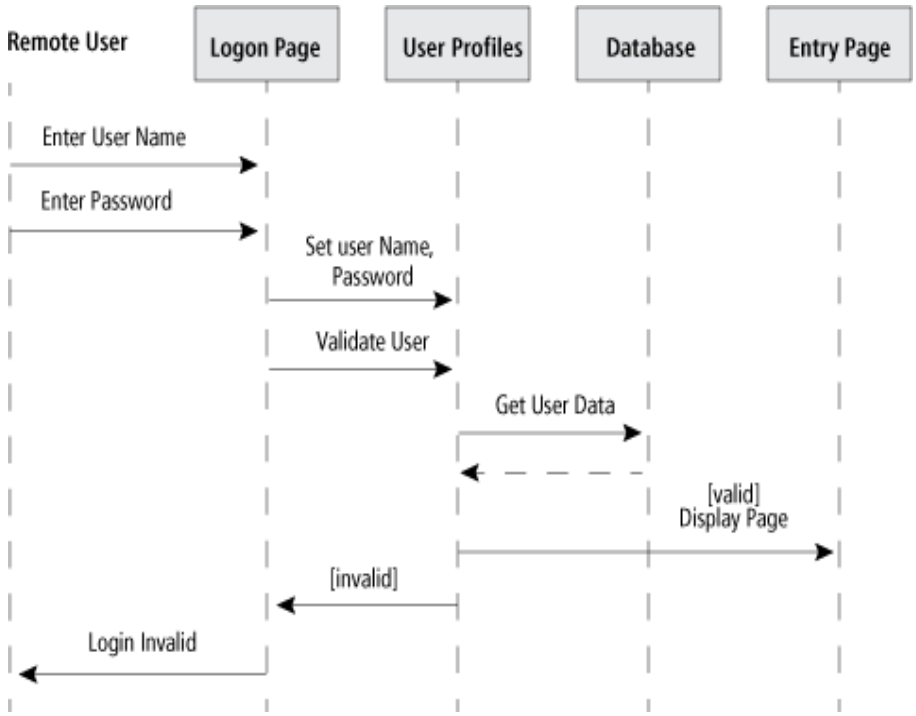


Figure-13

Remote user is an actor and login page, user profile, database, entry page these are the objects where user enters the username and password he/she is able to setup new password and validate the user, after getting the user data and revert back if validation is over and its correct it displays the page if not it shows the message as Login Invalid.

5.4 Activity Diagram

Activity diagram shows the sequence of activities and describe in parallel branch in con current flow of the system.

5.4.1 Activity Diagram for Admin

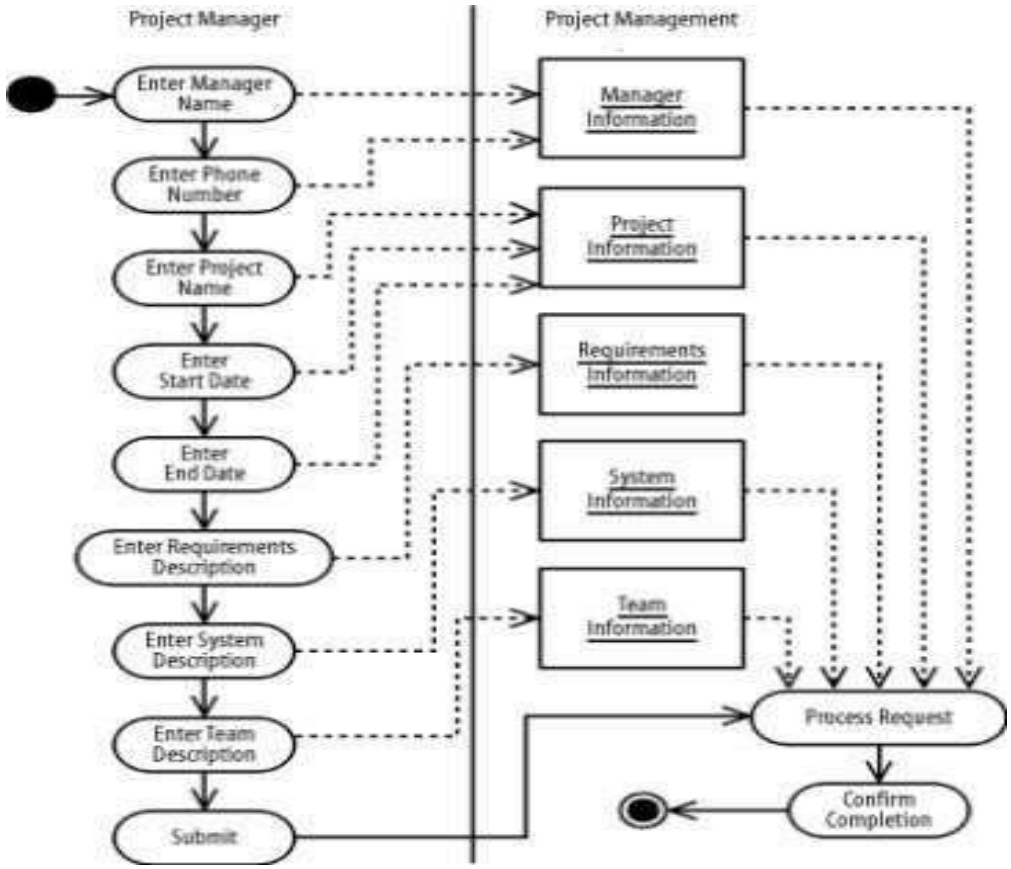


Figure-14 **The above diagram shows the activity diagram for admin**

- The dark shaded circle represents the starting point.
- There are two components one is Project manager and another is project management those are separated by a straight line.
- The rectangle with rounded edges represents the activity state or action state, where there are many in it for example Enter Manager Name, Enter Phone Number, Enter Project Name, etc. these are the action state or activity state.
- The arrows shows the flow of execution.
- The rectangle symbol which specifies an action to be taken after it is clicked.
- Dotted arrows are the simlanes which group the similar activities into one column.
- The shaded circle encircled with one more circle represents the end point where execution ends.

5.4.2 Activity Diagram for User

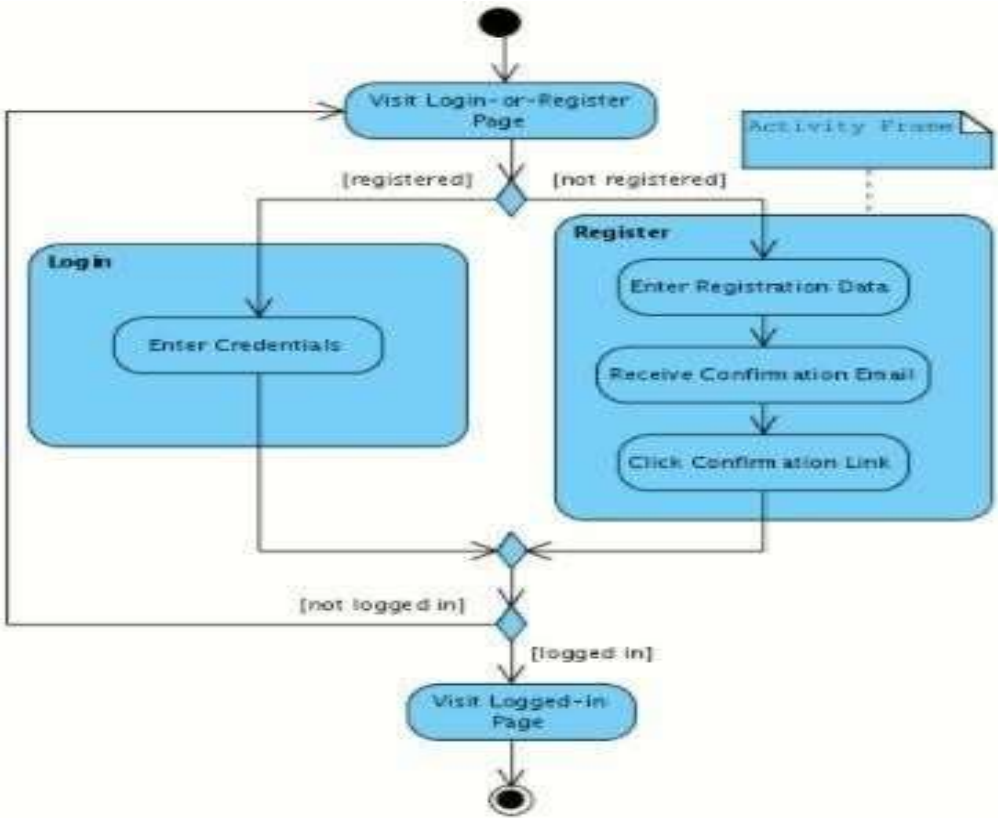
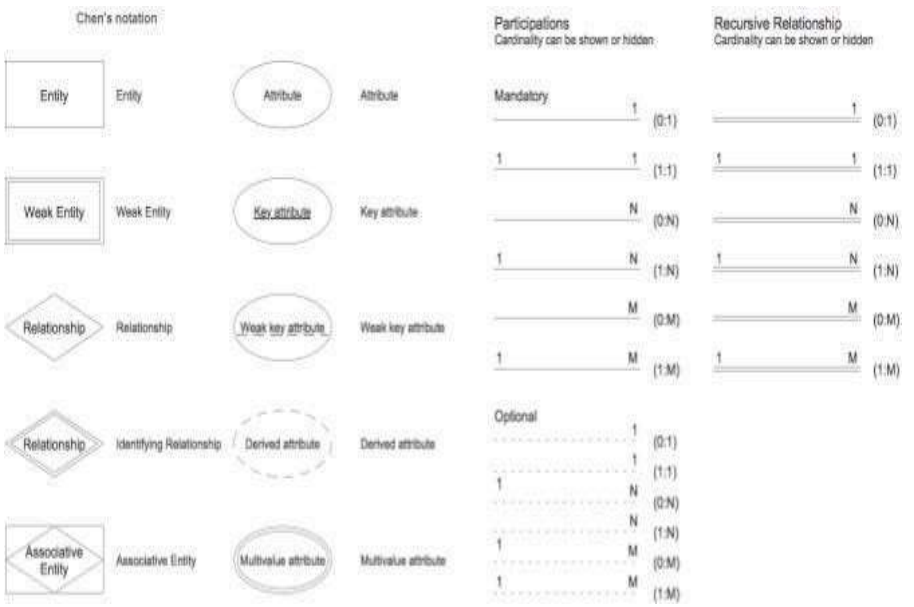


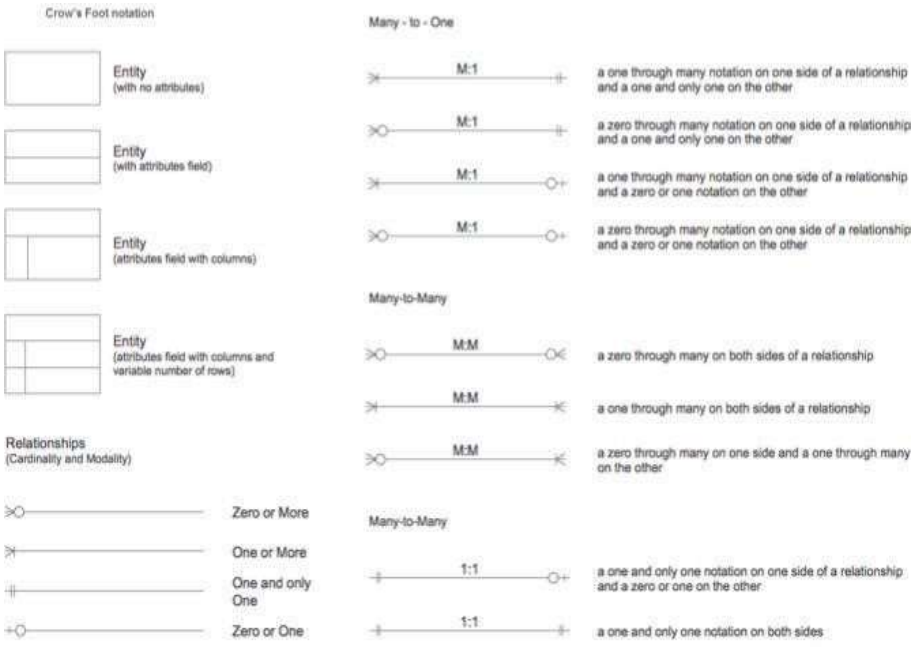
Figure-15 **The above diagram represents the activity diagram for user**

- Firstly user visits the login or register page this is the starting point of the execution
- If user is already registered he can able to type his login credentials and login, if not registered he has to register first
- Few steps to follow while registering has to enter the required data, receive the conformation mail, open the mail which is given while registering and click on the link and activate the account.
- Once the login is done login can able to visit the login page this the end of the execution.

5.5 ER Diagrams

Entity relationship model is a high level conceptual model which helps us to analyze data requirements and it is helpful for well-designed database.





5.5.1 ER diagram for User

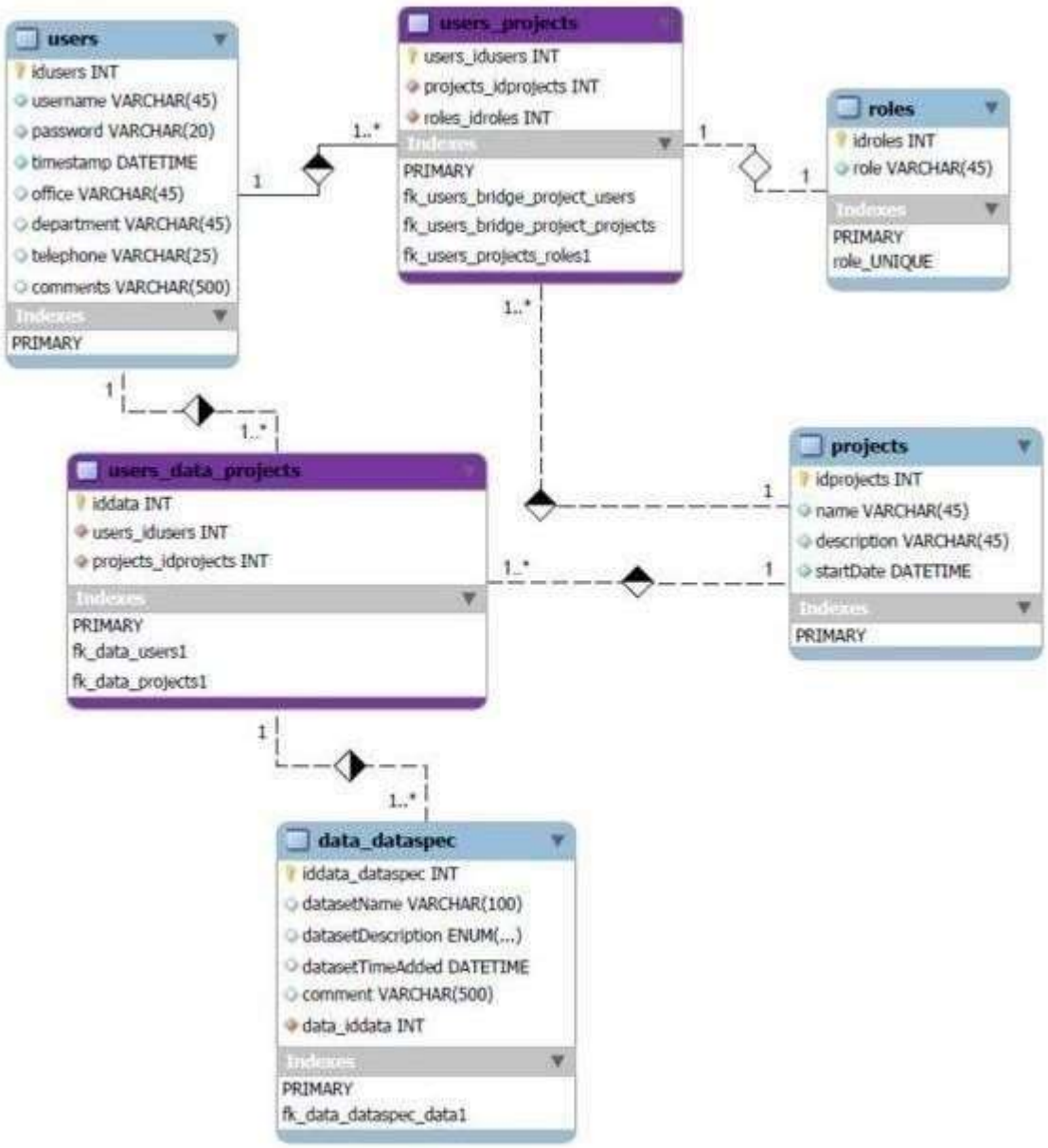


Figure-16 **The above figure represents the entity relationship diagram for user**

- Rectangle shape symbols represents the entity, entities are an objects that user wants to store the information, wherein it contains the attributes and its methods. For instance users, users_projects, roles, users_data_projects, projects and data_dataspec are the entities in the above ER Diagram.
- Diamond shape symbol symbolizes activity, it shows in which way the information is being shared between entities in the database.
- Here 1 and * represents the flow of data from one to one or one to many entities.

5.5.2 ER Diagram for Resource Allocation

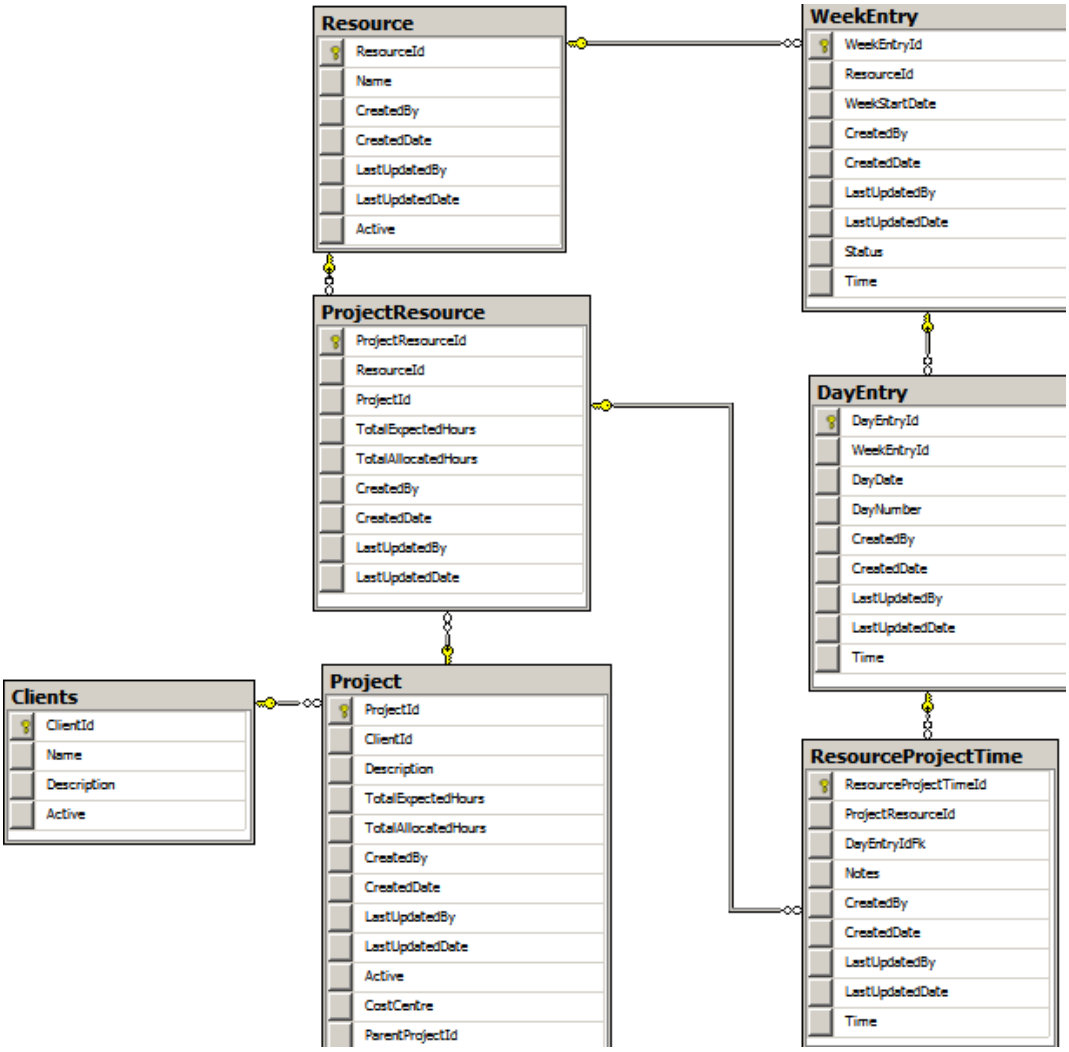


Figure-17 **<u>The above figure represents the ER Diagram for resource Allocation</u>**

Here in this diagram Clients, Resource, WeekEntry, ProjectResource, DayEntry, Project, ResourceProjectTime are the entities which has the attributes like, ClientId, Description, Name, ResourceId, CurrentDate, LastUpdatedDate, WeekEntryId, Status, CreatedBy, DayDate, DayNumber, ProjectId, Notes, which are connected using cardinality.

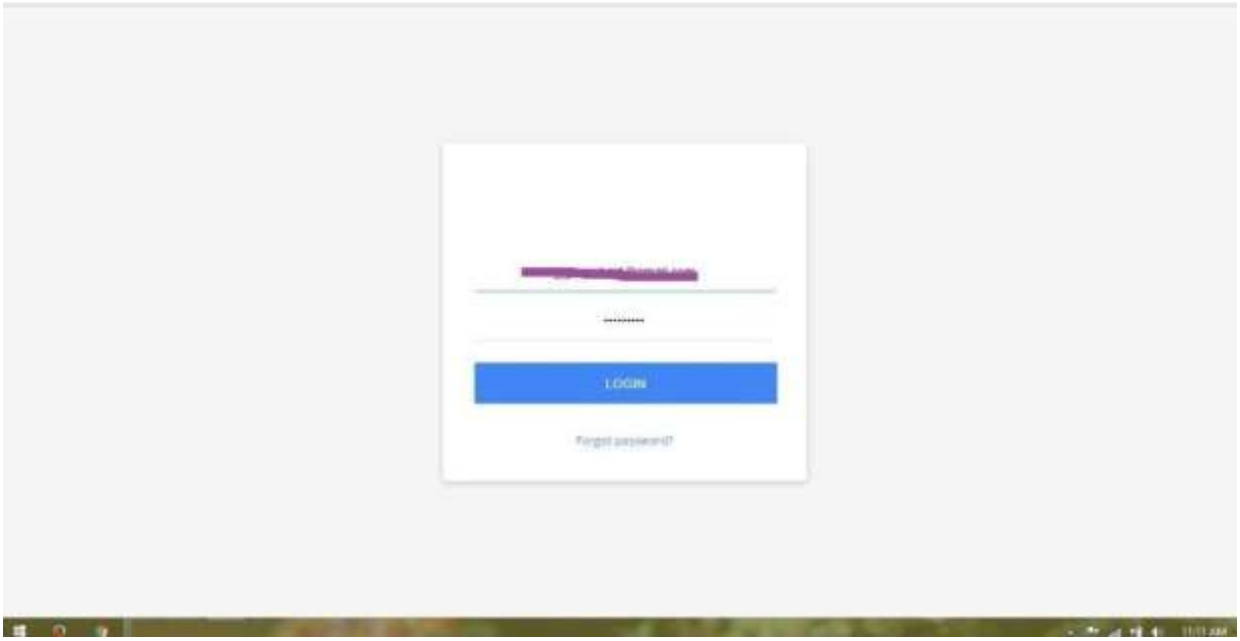
6. Implementation

This system is based on co-ordination, selective tools integration, business rules customization, information tracking, enterprise space provision, venture orientation, planning, etc.

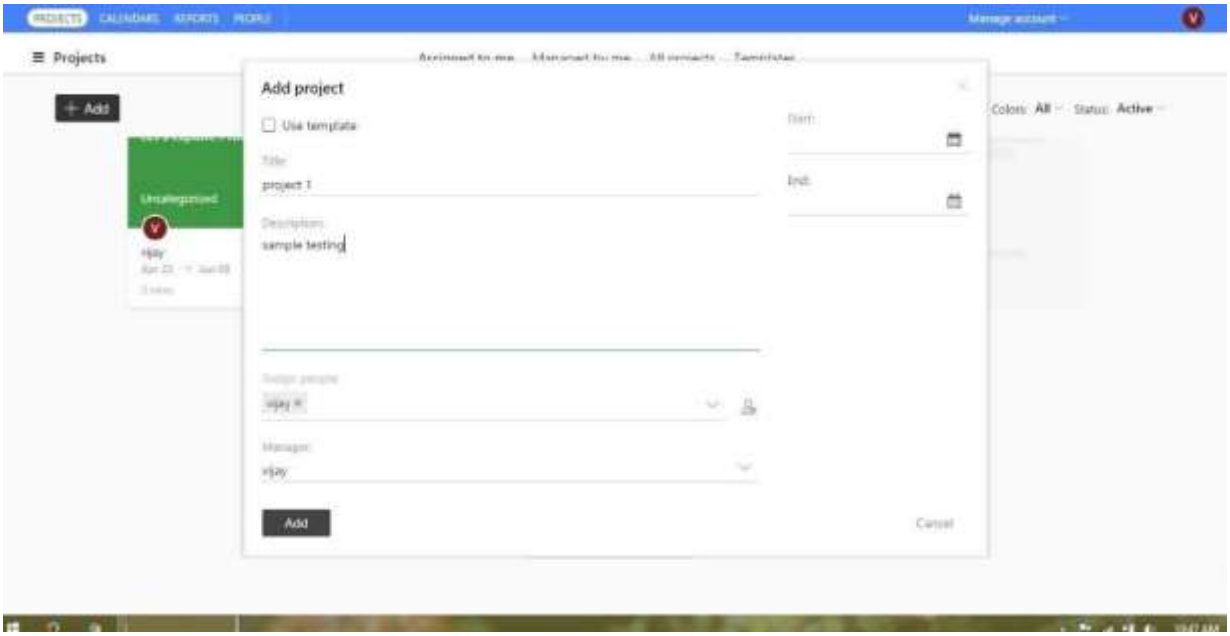
Administrative settings will be provided for admin:

- Profile design
- User's group design
- Cloud backup settings
- Synchronized repository design
- Customization and views
- Service settings

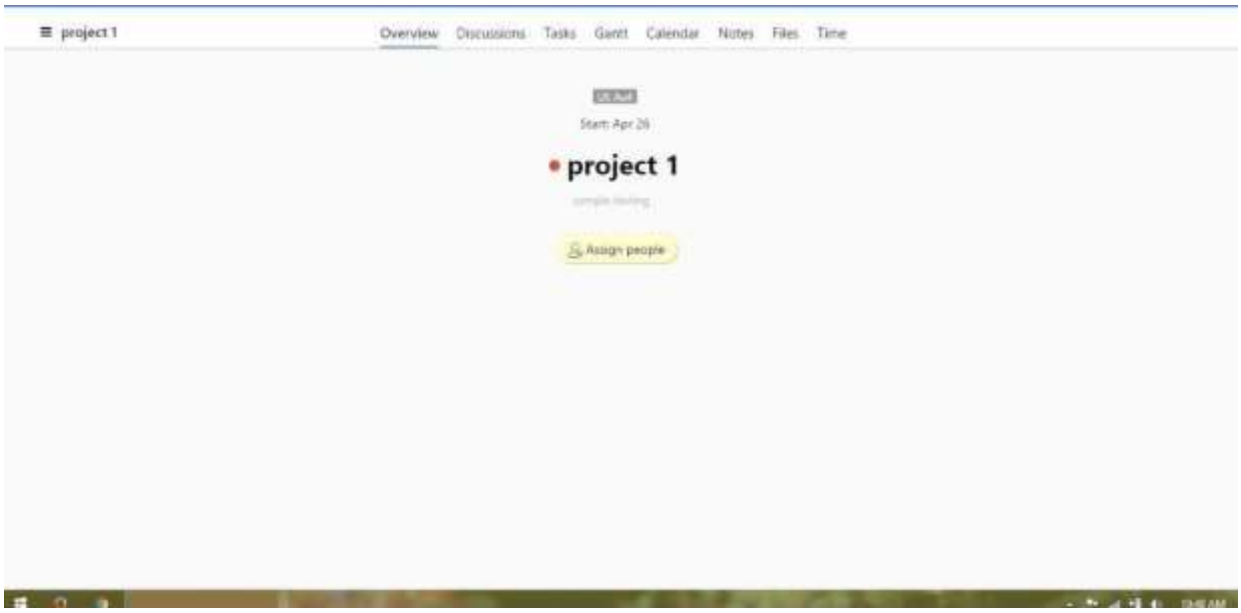
1. New option resources (selective resources for the usage will be provided).
2. Create space (individual activities can be performed).
3. Task matrix allocation (Process should supported).
4. Realtime collaboration will be supported in terms of virtual space creation, which will be used for targeting global clients.
5. Realtime tracking reports will be supported in this system.
6. Detailed reports with charts conversion is available.
7. Various communication mechanisms and presentation mechanisms should be supported.
8. Security is given much prominence by implementing data encryption algorithms like DES (data encryption standard) and AES (Advanced encryption standard).
9. Dashboard contains Overview, discussion, Gantt chart, Calendar, Notes, Files, and Time Tracking.
10. Milestones of the employees while providing appraisals have been easily checked by admin or manager because of the in-built reports producing system which are of charts type for example Gantt charts, Pie-charts, Bar graphs, etc.
11. Our system provides third party integration compatibility for example Cloud platform, Dropbox, Drives, and links.
12. All the data which is stored on data repositories by using DES (Data encryption standard) and AES (Advanced encryption standard) algorithms for the security.



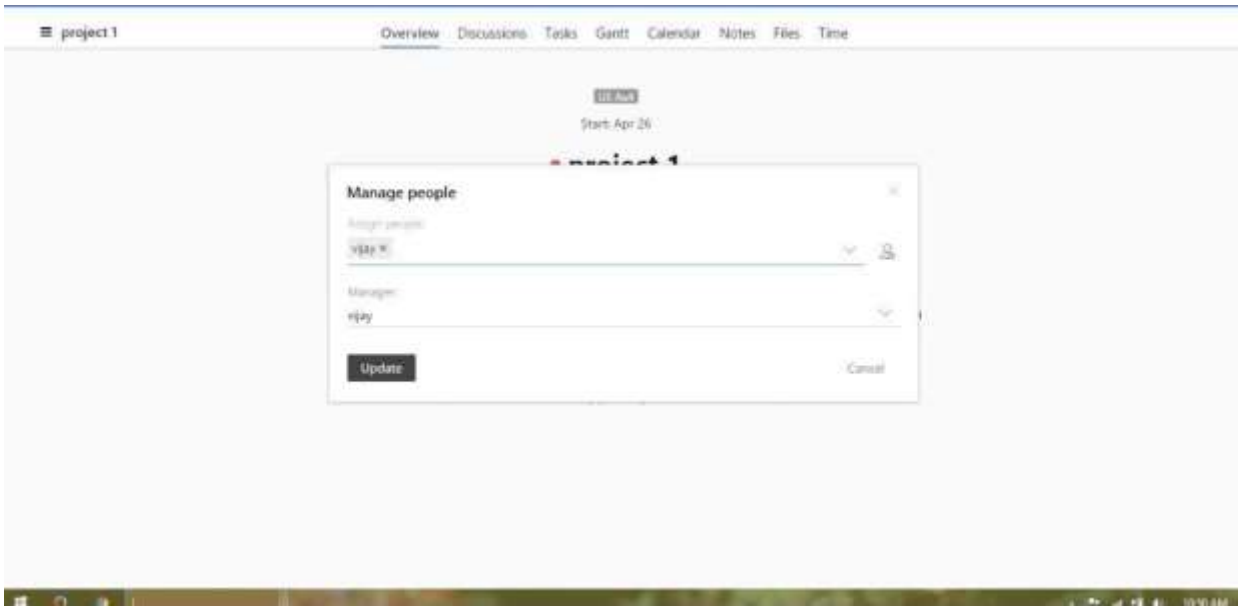
Admin can Login



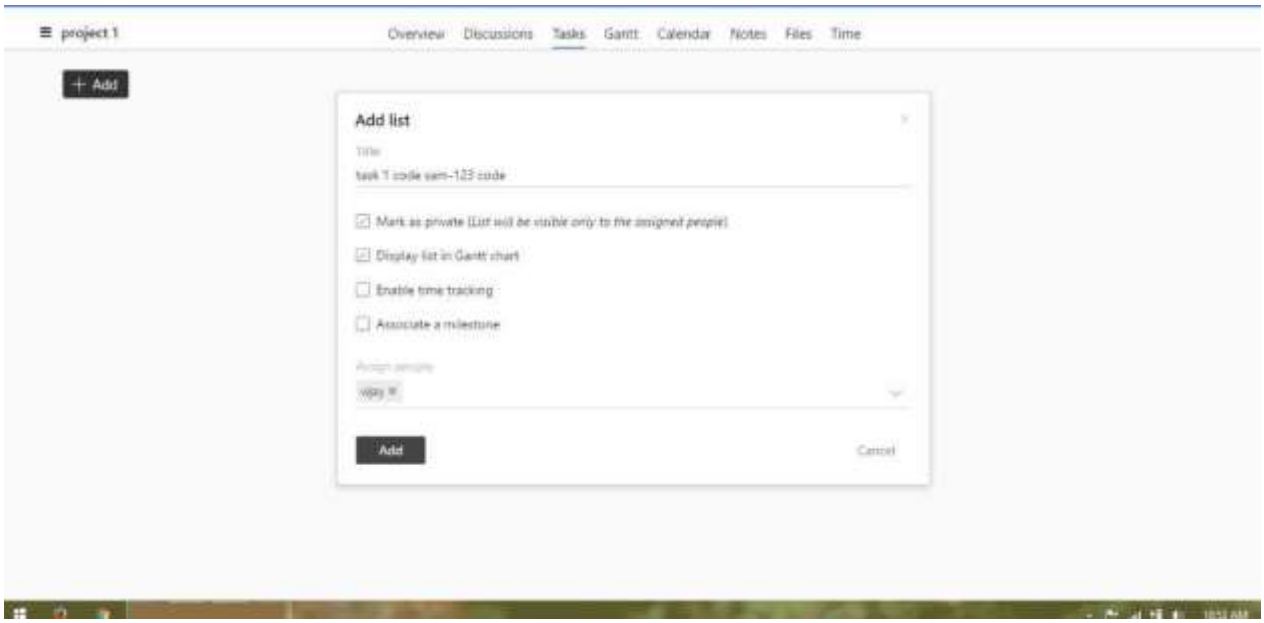
Different pages can be formed and activities can be managed (e.g.-project operations)



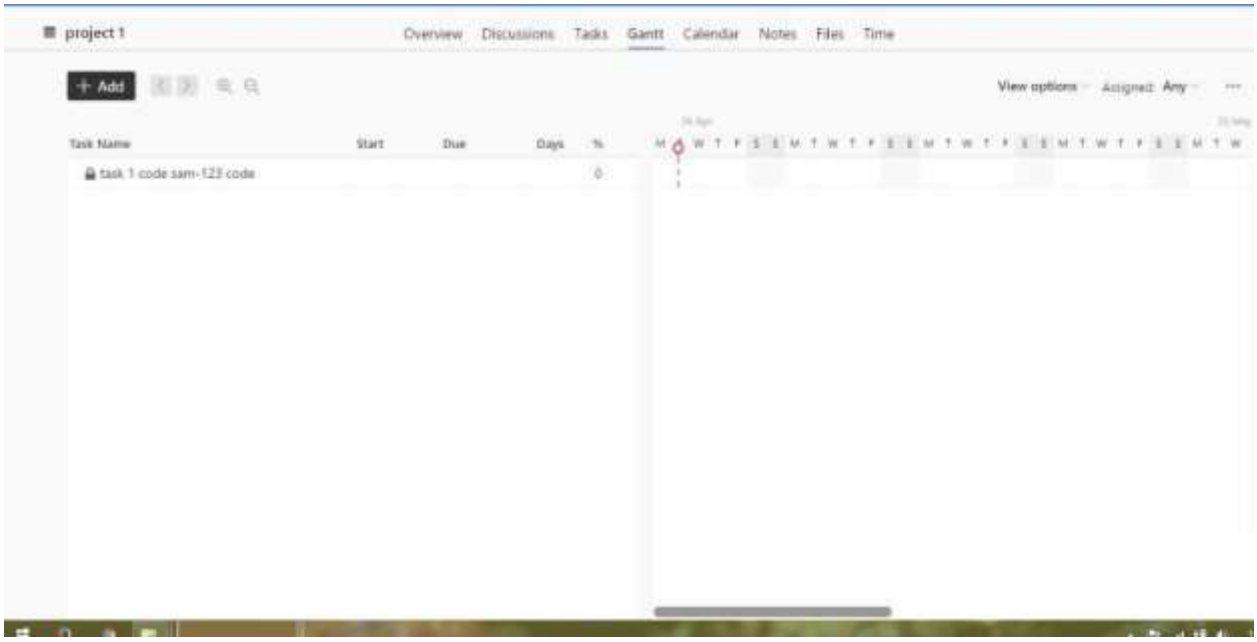
Dashboard selected and working options provided



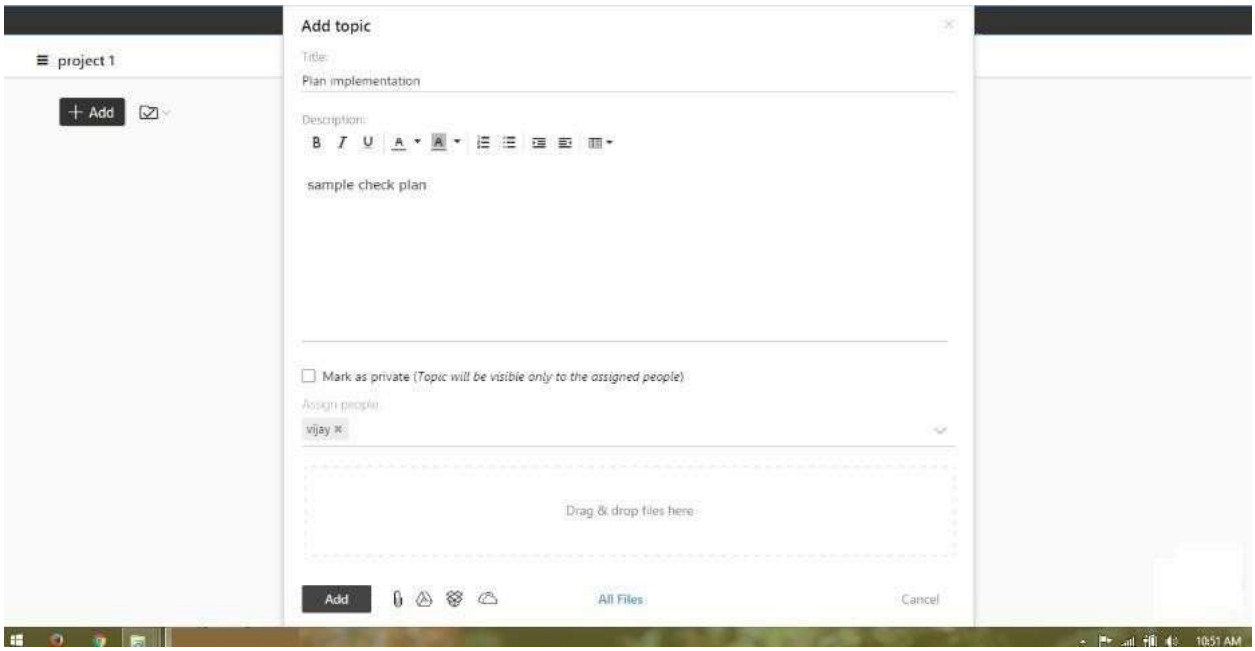
User’s management



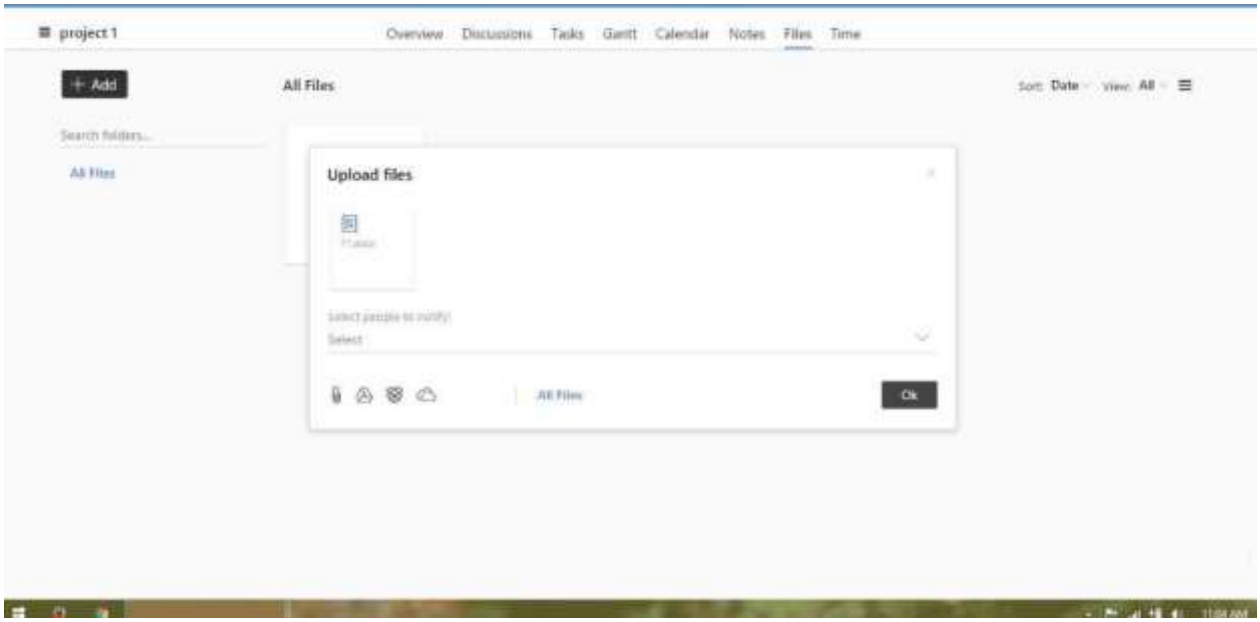
Tracking the activities



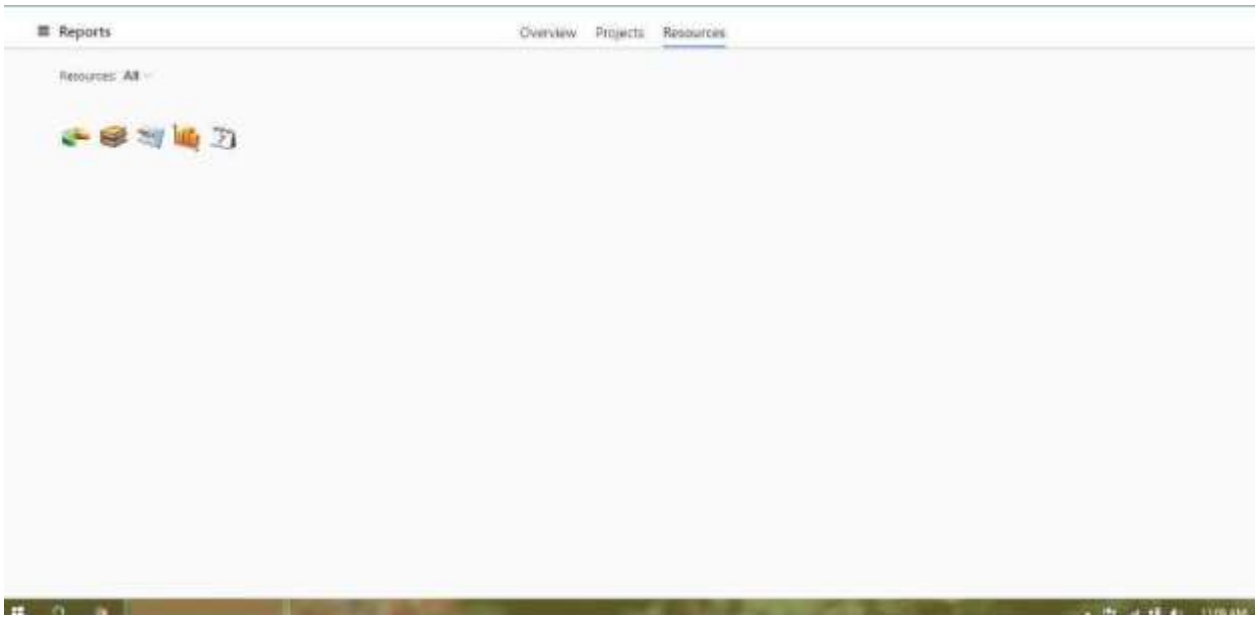
Gantt charts for task



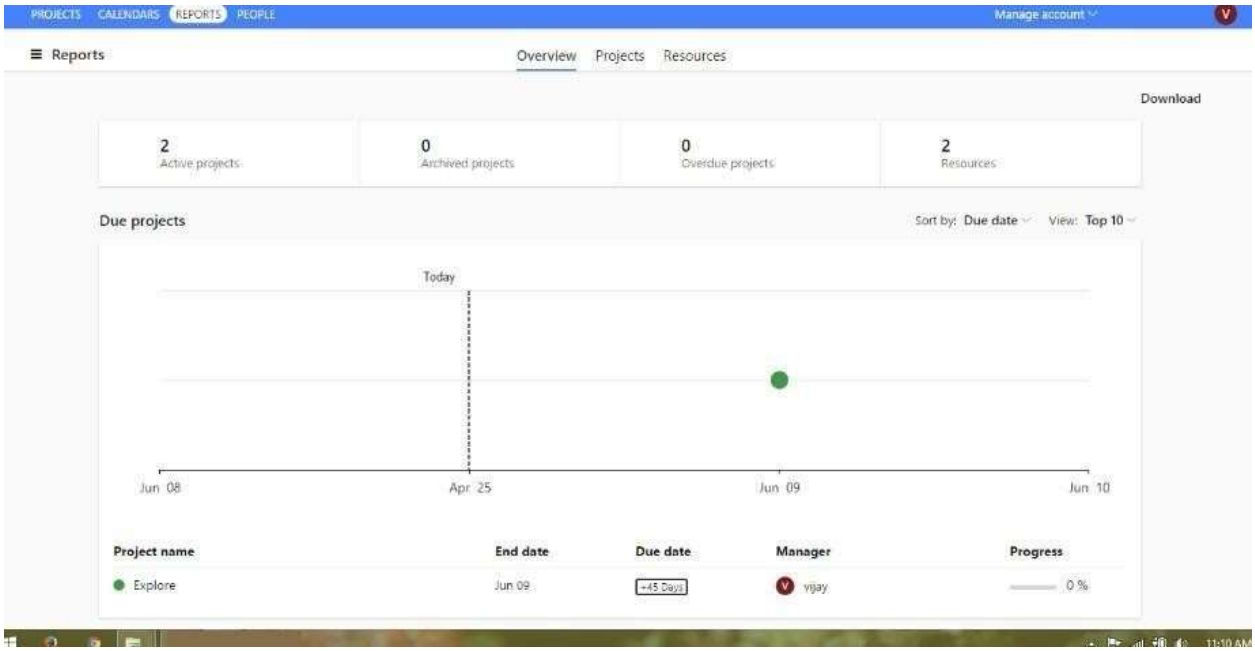
Adding the content and integration of third party platforms



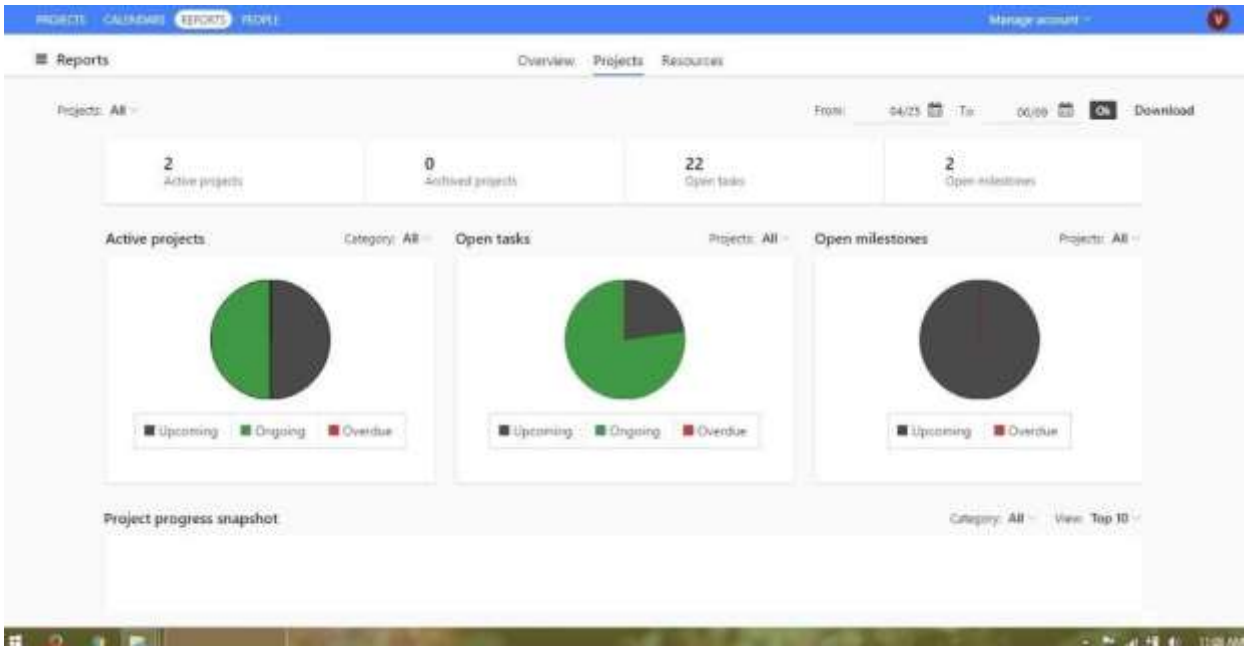
Integration



Resources



Reports- shows the overview



Various stat and graph generation

7. Software Testing

Software testing will promote the quality Association and will help to appropriately strategize the features that are provided to the clients. Software testing will enhance the workability each and every feature will be tested and will be documented for the process that has been Incorporated, the inputs that have provided and different types of output that are achieved. With the help of the results any type of bugs can be acknowledged and even the reference of the cause can be achieved. As early as possible the errors are required to be achieved and it has to be rectified as it will have a better quality perception and control perception to the proposed system. Stakeholders that are associated with the project will be taken into confidence by providing each reference that has been discussed in the requirement gathering and each reference should be working exactly the same way.

Various types of techniques will be selected to have the references of testing which will be done in a much planned way. Substantial usage of the resources in terms of the tools will be associated so that automated provisional understanding can be achieved as the software's will provide better check onto the errors. Considerations are required to be properly check because different scenarios of virtual working and the intrusion of different types of utility preferences that will be utilized by the system has to be checked because at the end different accounts will be having different references of needs.

Figure-6 **The above diagram shows the association of test planning is shown**

1. Unit Testing

Unit testing is performed to get all types of units checked properly for scenario and for the objective that is required to be achieved individually by them.

We are using the static code analysis to acknowledge effects of workability which will be help to accept and understand the functional perceptions of each unit.

The space that will be designed are required to be checked for the working this is acknowledged to have setup based understanding about the setup based working needed.

The information which will be achieved by the authenticated user forgetting the knowledge of the work perception will be taken as we have to check that it should provide accurate information.

The information which will be associated with the technological knowledge is also seen as different type of resources is included.

2. Black Box Testing

When the system is oriented client wise it have to be acknowledged in a way that each client can have clear idea about how to use the process and to test it so the black box testing will be conducted where the time will be checking variation some work.

We will be using the fuzz testing which will be done to get all functionality check for the design of the space, the usage of different types of collateral, different types of a report information generation etc.

Test cases

Serial	Test-case Description	Test-Input	Results to be provided	Actual obtained result	Test Status	Severity
1	Administrator	Login details	Manage account provisions provided	Added the requirements	Pass	Critical
2	Features for working	Selections	Selected options	Working options added	Pass	Critical
3	Ventures	Details added	Details for the venture association added	All required	Pass	Critical
4	Define tasking	Details for the task allocation provided	Details selected	Notification provided	Pass	Critical
5	Data and conditions	Selections and uploads	Conditions can be provided	Data reference arranged	Pass	Critical
6	Updating info	Automatic and selective inputs	Definitions provided	All working reference seen	Pass	Major

7	Reports and filters	Automated	Reports with filter options provided	Seen different reports	Pass	Critical
8	Process resource	Selection	Category	Reference of resource added with direct usage	Pass	Critical
9	Workforce	Working guide line	workforce details added	Various data formation provided	Pass	Critical

8. Conclusion

The system meets all specific success criteria that are required to undertake different types of technological based project is based on different Technologies and requires different types of resources for the development and implementation. We utilize the system for different types of space design and we found that it works in accordance to the regulations that have provided and all types of guidelines for the working is also associated. When we have to utilize the system we also acknowledge that at a parallel multiple technology from relations can be organized which is very much important when the client is having multiple projects with different types of clients worldwide.

We also found that each working can be organized individually as the references that have provided will be set up on the individual workers place where different set of teams will be added and even different set of resources will be acknowledged. We also found that system provides all provisions of data management where we were able to organize the business state according to the requirements of the company and data accessibility is also guided by different types of set of rules. We also found that for the establishment of fast working the service provider provides different types of templates which can be used as work sample to acknowledge the working task. Each template can be utilized by making the modifications that have acquired and will be helpful to accomplish different types of business processes fast.

9. Future Enhancements

When we are providing the services for the venture acknowledgements based on technology it is known that new technologies in new type of working references are required by the client in the future so there will be a provision for future enhancement where all references required by the clients will be added. Some important considerations are listed as following-

When the references of design perceptions of the space and usability of the system is provided it will be acknowledged to with a detailed video representation for better understand.

Both parallel collections in terms of request can be added in the future so that clients will be having more options to select.

The changes that have applied should be modified according to the perfection where clients will be provided with more customized options.

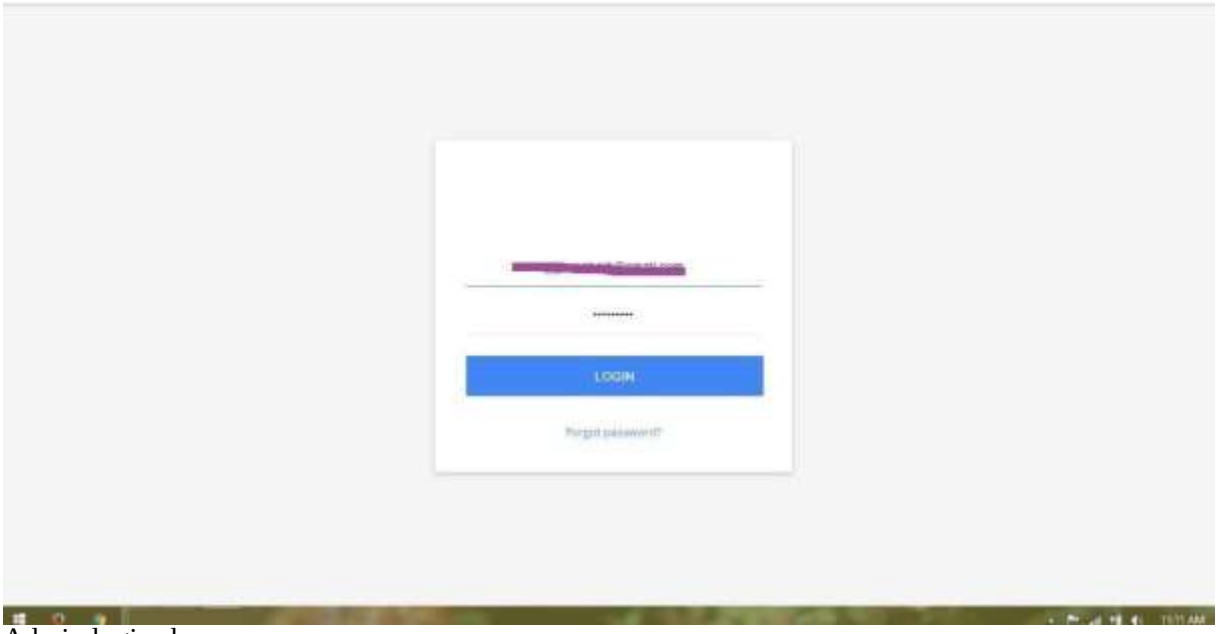
10. Bibliography

- "The Arrival of Java 14!" Oracle. March 17, 2020. Retrieved March 17, 2020.
- "Binstock, Andrew (May 20, 2015)."Java's 20 Years of Innovation". March 18, 2016.

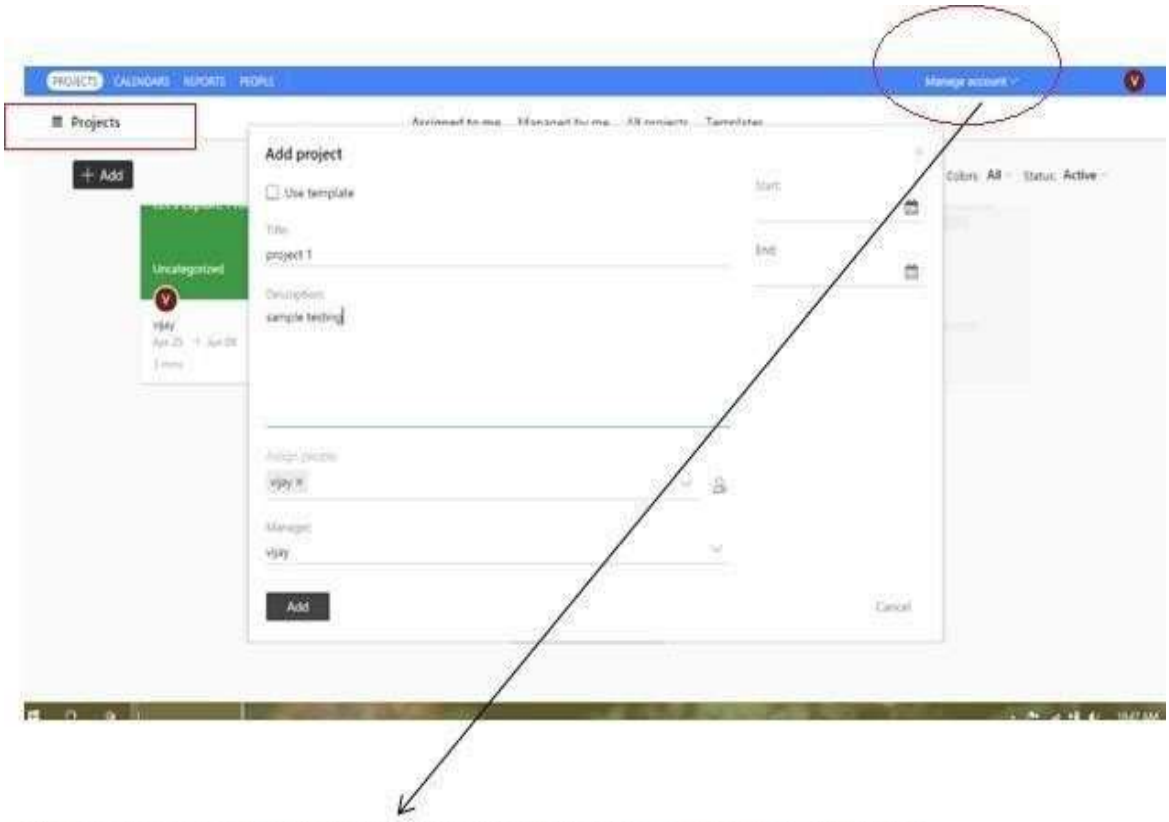
Web referrals-

- www.wikipedia.com
- www.scribd.com
- www.microsoft.com
- www.google.com

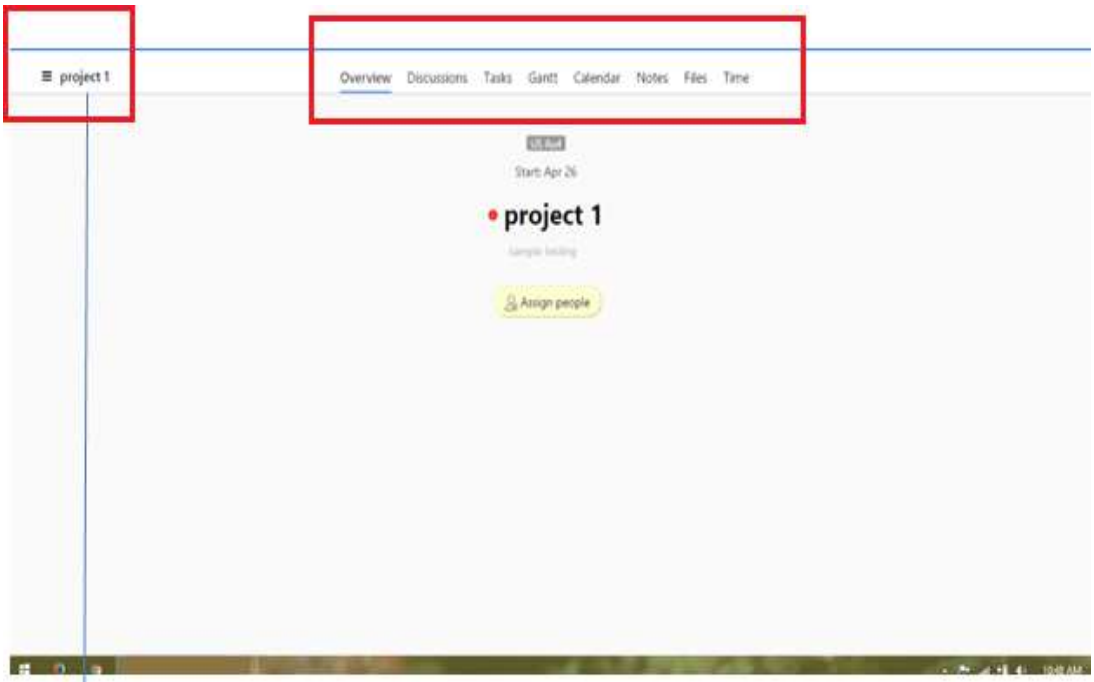
11. User Manual



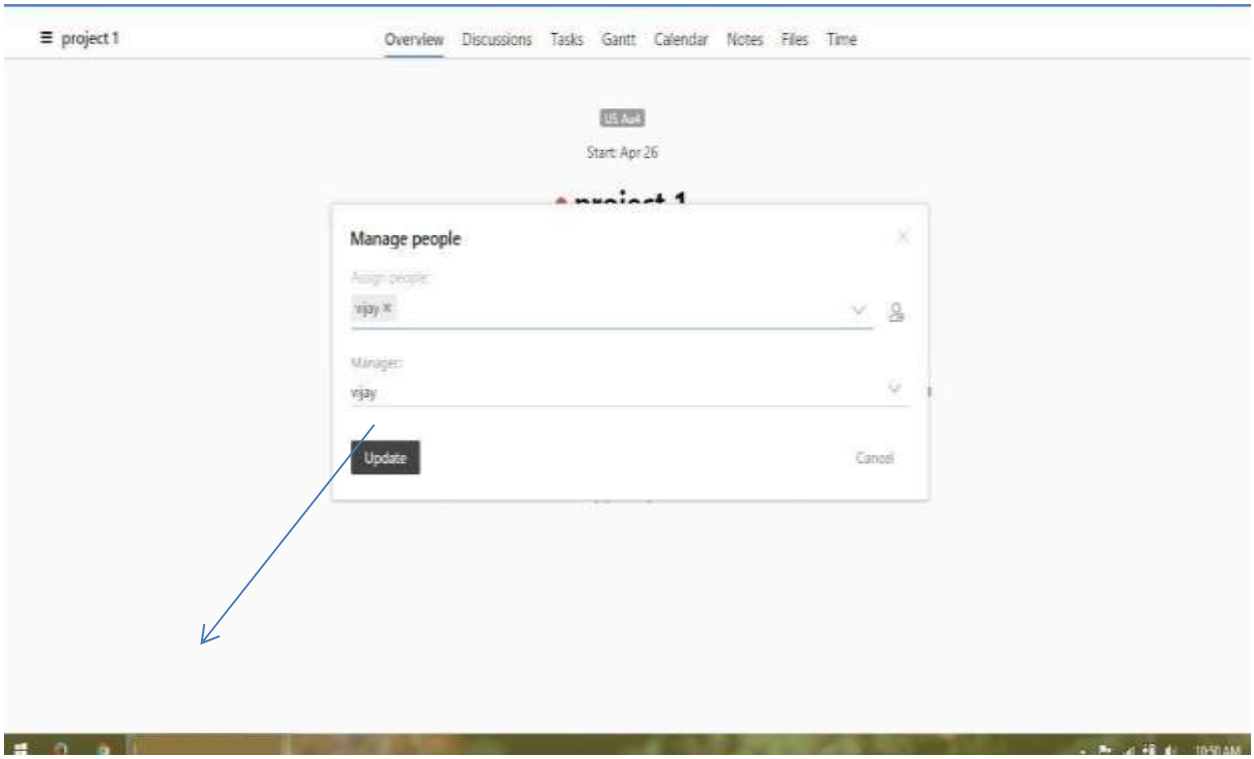
Admin login shown



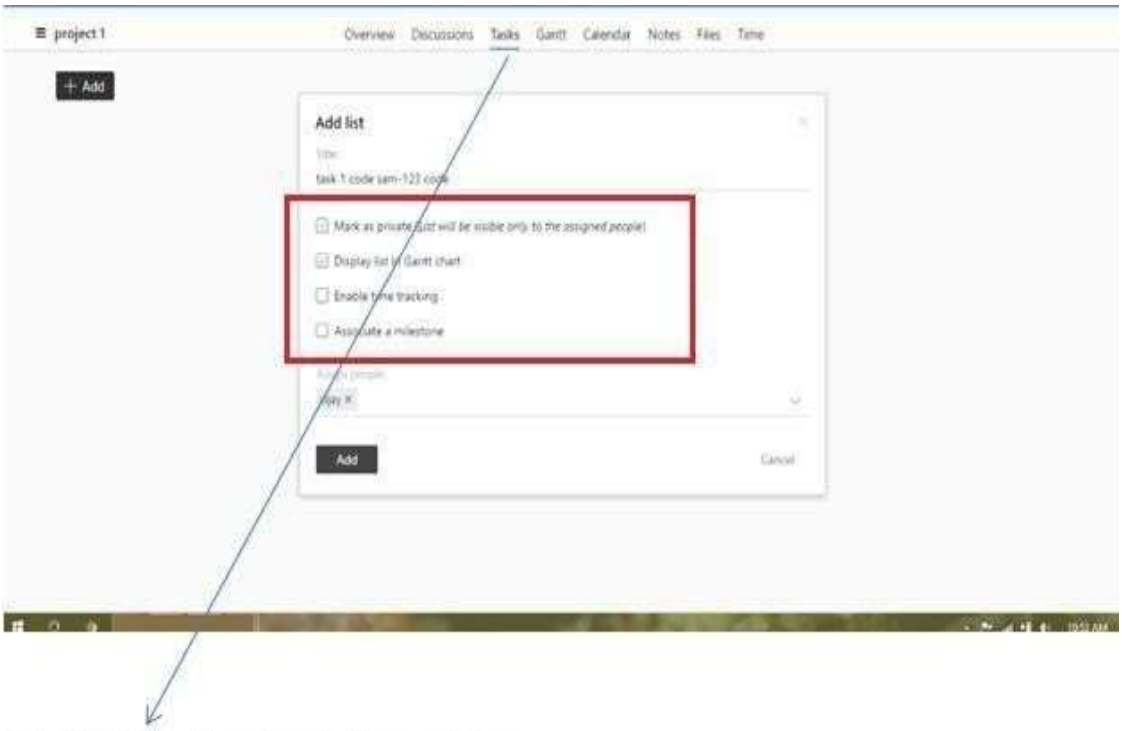
From manage account different dashboards will be defined eg. Project dashboard



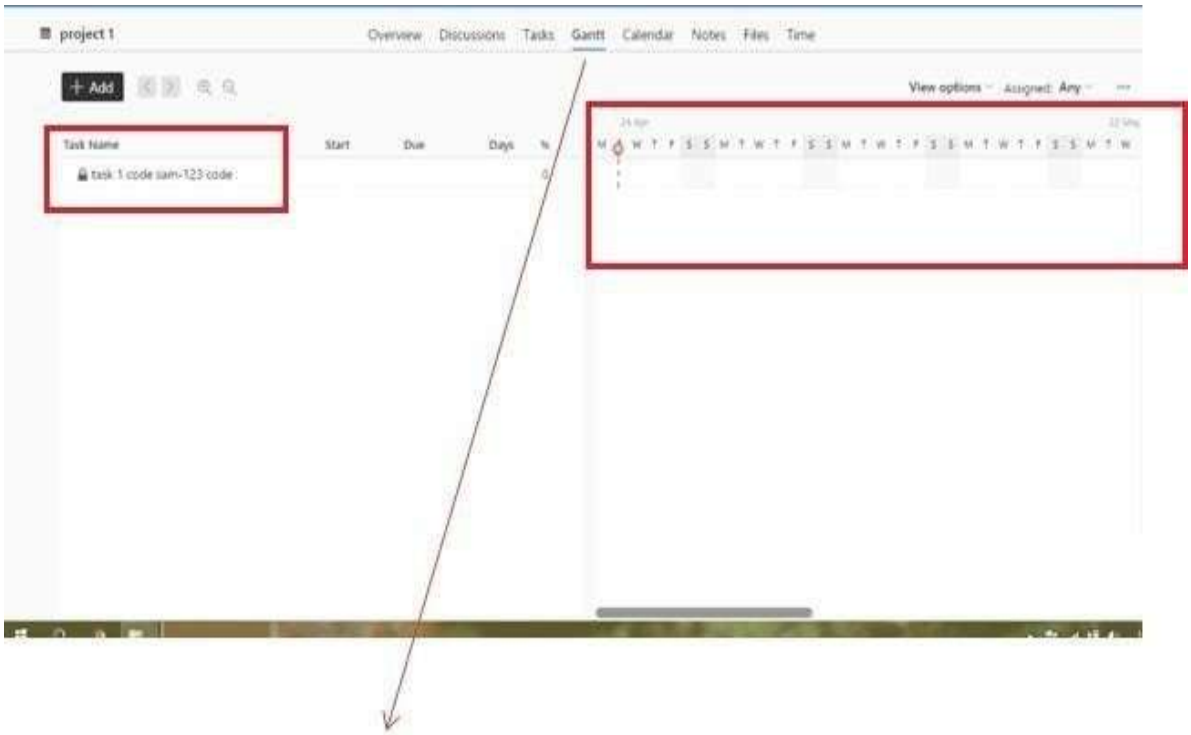
On the selected dashboard different reference of the working is provided eg task, Gantt, files, time tracking etc



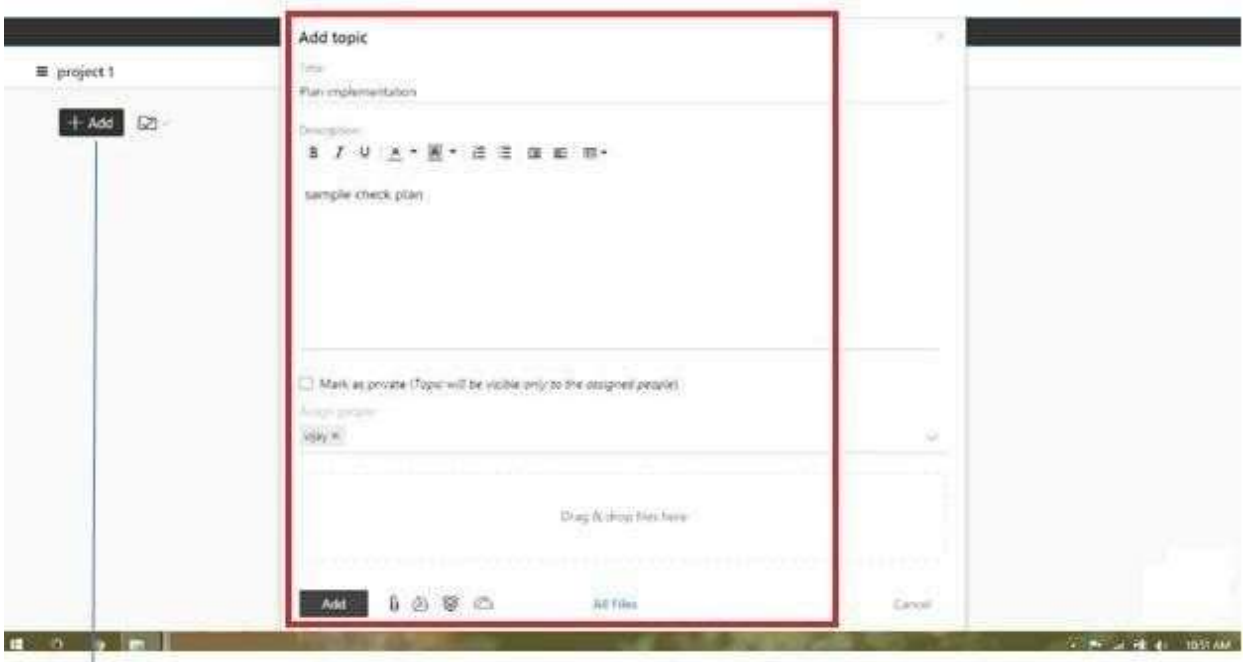
User's management



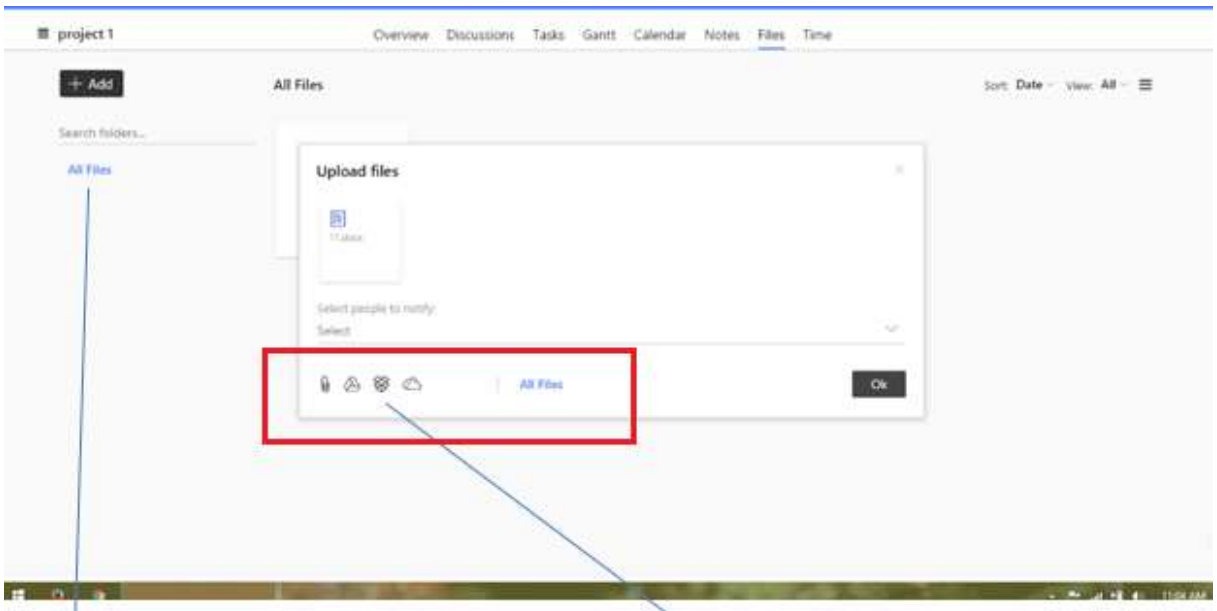
Task allocations with various tracking provisions



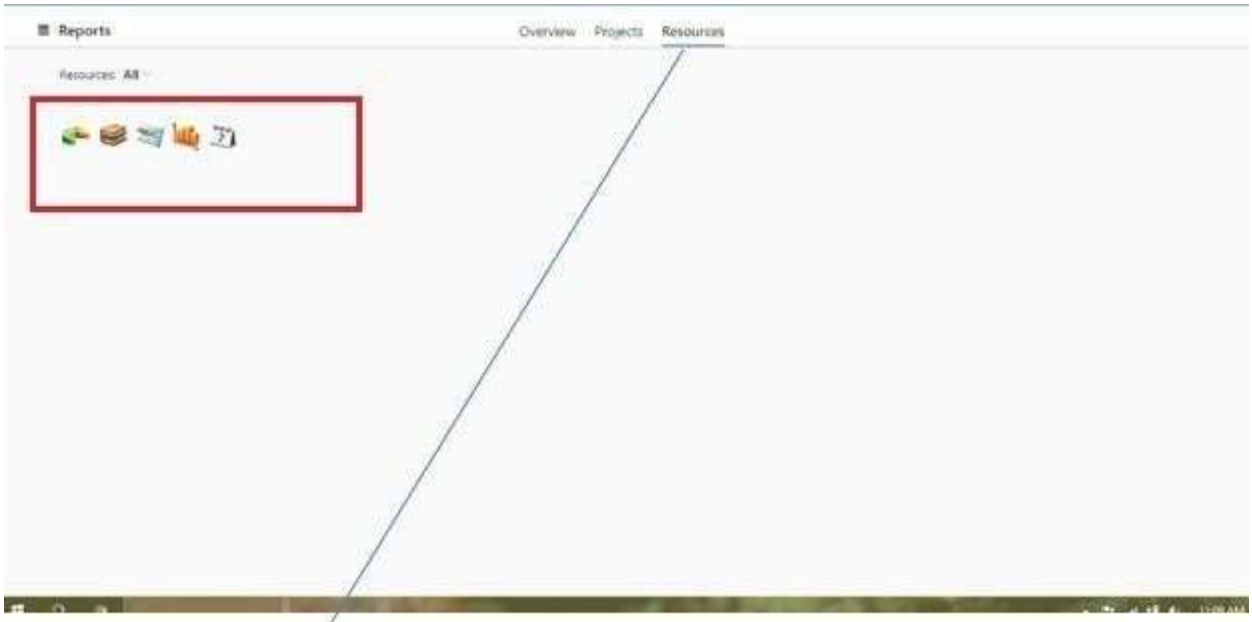
Gantt charts where all tasks and reference inclusion of how much working is performed is shown



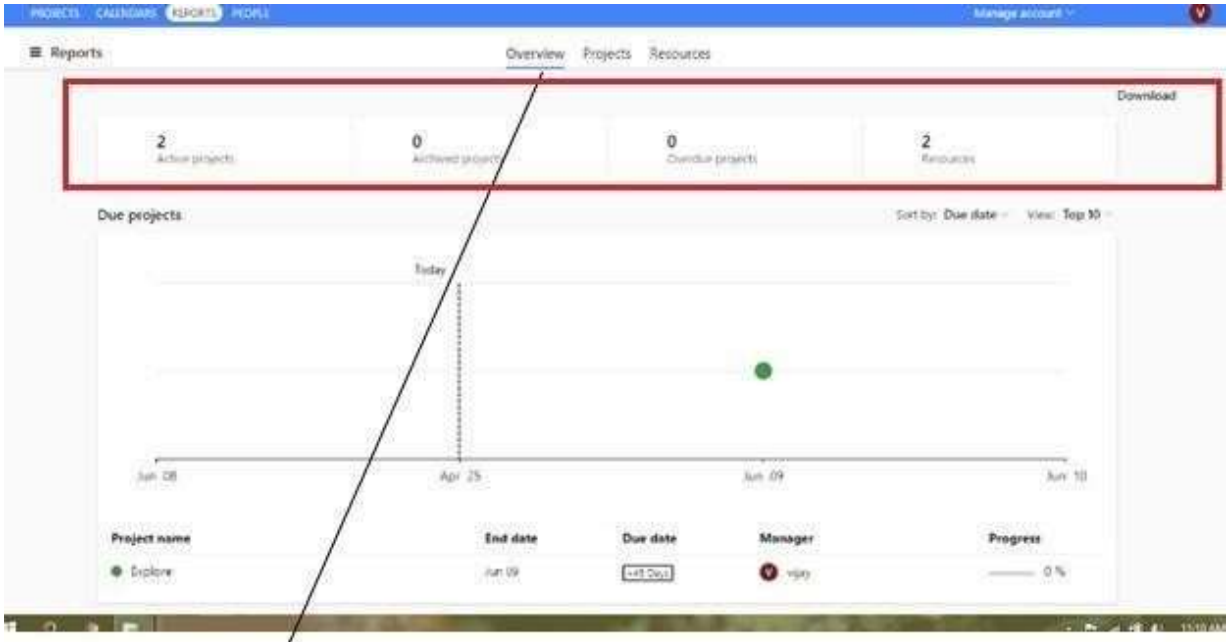
Content design (all design options are provided)



Integration (all different platform compatibility is shown e.g. uploads, drives, drop box, and cloud)



Resources usability can be tracked



Reports- shows the overview

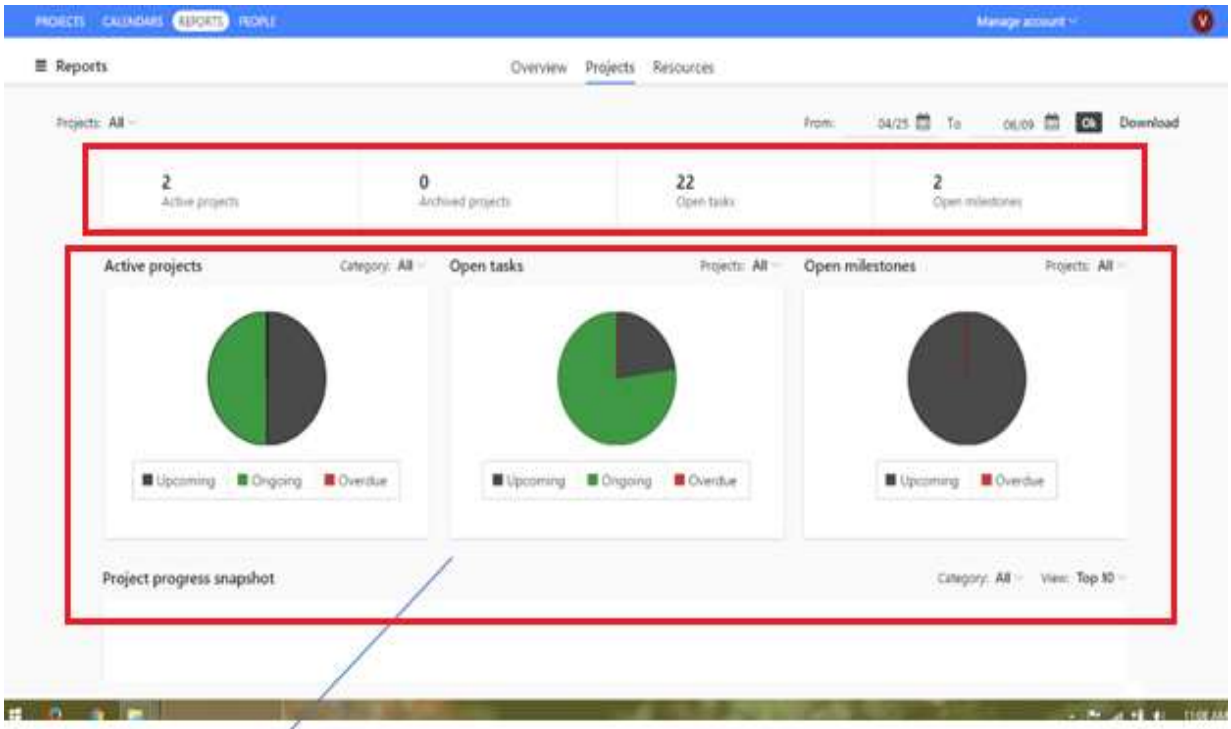


Chart display and stat is shown