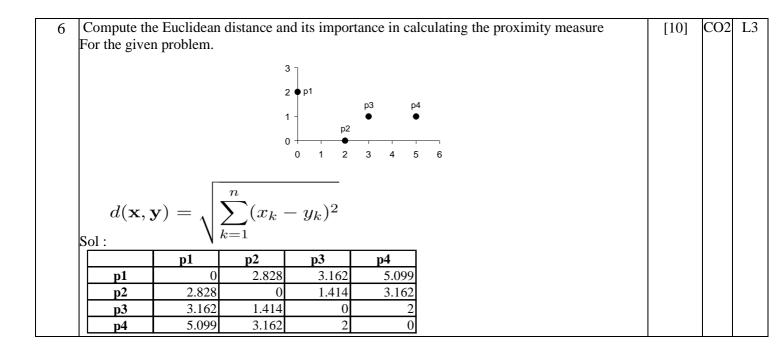
USN					



03/06/2024 Give the difference of the differenc	Duration: Ans	DATA WA	ASSESSMENT REHOUSIN		1 – June-20 2 Sub Code:	24 21IS643		Branch:	ISE	
03/06/2024 Give the difference of the differenc	Duration: Ans	90 min		G	Sub Code:	21IS643		Branch:	ISE	•
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ol: Definition ist the differer			e: 03/06/2024 Duration: 90 min Max Marks: 50 Sem/Sec:			VI / C			OI	3E
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ol: Definition ist the differer						s Kev featur	es.	[05]	CO1	Ll
List the differer						-		[,,,		
)	[05]	CO1	L1
ol :Any 5 poin		ozii iioiii	OZIM III termi	01 11		arrios.		[05]		
Table 4.1 Comp		and OLAP Syst	ems							
Feature	OLTF)		OLA	P					
Characteristic	opera	ational processin	g	info	rmational processing	2				
Orientation	10.00		0			D.				l
User	clerk	, DBA, database	professional	kno	wledge worker (e.g.,	manager,				
Function	day-t	o-day operation:	S							
DB design	ER-b	ased, application	-oriented	star	snowflake, subject-o	oriented				l
Data	curre	nt, guaranteed u	p-to-date	over	time					
Summarization		The second secon			The state of the s					l
View	N. State Contraction					nsional				l
			ion							l
					100					l
										l
	index	masn on primar	у кеу	iots	oi scans					l
accessed	tens			mill	ions					l
Number of users	thous	sands		hun	dreds					l
DB size	GB to	high-order GB		$\geq T$	В					l
Priority	high p	performance, hig	gh availability	high	flexibility, end-user	autonomy				l
Metric	transa	action throughp	ut	quei	y throughput, respo	nse time				l
Explain the thre	e-tier archite	ecture of the	Data warehous	e in c	letail with a ne	at diagram		[06]	CO1	L2
			Data Warenous		otali with a lie	ar aragram.		[oo]		
or . Doi . Diag	ram Exp	iananon								
		Query/report		/ To						
	Men	OLAP server Administration Metadata repository	OIAP	Mi Oi	AP server tiom tier: a warehouse					
	Orientation User Function DB design Data Summarization View Unit of work Access Focus Operations Number of records accessed Number of users DB size Priority Metric Explain the three	Orientation trans User clerk Function day-t DB design ER-b Data curre Summarization prim View detail Unit of work short Access read/ Focus data i Operations index Number of records accessed tens Number of users thous DB size GB to Priority high Metric trans. Explain the three-tier archite ol: Sol: Diagram + Exp	Orientation User clerk, DBA, database Function day-to-day operations DB design Data ER-based, application current, guaranteed u primitive, highly deta detailed, flat relationa short, simple transact read/write data in index/hash on primar Number of records accessed tens Number of users DB size GB to high-order GB Priority high performance, high transaction throughput Explain the three-tier architecture of the DI: Sol: Diagram + Explanation	Orientation User clerk, DBA, database professional Function day-to-day operations ER-based, application-oriented current, guaranteed up-to-date Summarization primitive, highly detailed detailed, flat relational short, simple transaction read/write Focus data in Operations index/hash on primary key Number of records accessed tens Number of users thousands DB size GB to high-order GB high performance, high availability transaction throughput Explain the three-tier architecture of the Data warehous oll: Sol: Diagram + Explanation	Orientation transaction clerk, DBA, database professional know exect of the Data warehouse in Colar base of the Data warehouse in Colar percent of the Data warehouse in Cola	Orientation User clerk, DBA, database professional User clerk, DBA, database professional day-to-day operations DB design ER-based, application-oriented Data current, guaranteed up-to-date vover time summarized, consolidate summarized, consolidate summarized, multidime over time summarized, multidime summarized, onsolidate summarized, multidime summarized, onsolidate summarized, multidime summarized, onsolidate s	Orientation User clerk, DBA, database professional knowledge worker (e.g., manager, executive, analyst) Function day-to-day operations long-term informational requirements decision support star/snowflake, subject-oriented star/snowflake, subject-oriented historic, accuracy maintained over time Summarization primitive, highly detailed summarized, consolidated vore time summarized, consolidated summarized, consolidated summarized, multidimensional complex query mostly read data in information out lots of scans Number of records accessed tens millions hundreds accessed tens millions hundreds DB size GB to high-order GB bigh performance, high availability transaction throughput query throughput, response time Explain the three-tier architecture of the Data warehouse in detail with a neat diagram. Outs a warehouse in detail with a neat diagram. Data mining there to the data warehouse in detail with a neat diagram. Data mining there to the data warehouse in detail with a neat diagram.	Orientation User clerk, DBA, database professional knowledge worker (e.g., manager, executive, analyst) Function day-to-day operations long-term informational requirements decision support star/snowflake, subject-oriented historic, accuracy maintained over time Summarization primitive, highly detailed summarized, consolidated summarized, consolidated summarized, multidimensional complex query Access read/write mostly read information out lots of scans Number of records accessed tens millions Number of users thousands hundreds DB size GB to high-order GB ≥ TB Dight flexibility, end-user autonomy query throughput, response time Explain the three-tier architecture of the Data warehouse in detail with a neat diagram. DI SOI: Diagram + Explanation	Orientation transaction clerk, DBA, database professional knowledge worker (e.g., manager, executive, analyst) Function day-to-day operations long-term informational requirements decision support star/snowflake, subject-oriented star/snowflake, subject-oriented historic, accuracy maintained over time summarized, consolidated over time summarized, consolidated summarized, consolidated summarized, multidimensional complex query mostly read data in information out lots of scans Number of records accessed tens millions Number of suers thousands hundreds DB size GB to high-order GB high performance, high availability transaction throughput query throughput, response time Explain the three-tier architecture of the Data warehouse in detail with a neat diagram. [06]	Orientation transaction derk, DBA, database professional knowledge worker (e.g., manager, executive, analyst) Function day-to-day operations long-term informational requirements decision support star/snowflake, subject-oriented historic, accuracy maintained over time over time over time over time summarization primitive, highly detailed summarized, consolidated summarized, multidimensional Unit of work short, simple transaction complex query mostly read information out Operations index/hash on primary key lots of scans Number of records accessed tens millions Number of users thousands hundreds DB size GB to high-order GB ≥ TB Priority high performance, high availability high flexibility, end-user autonomy duery throughput, response time explain the three-tier architecture of the Data warehouse in detail with a neat diagram. [06] CO1 Sol: Diagram + Explanation

A Three Tier Data Warehouse Architecture:

,	ish between RO	LAP,MOLAP,HOLAP	[04]	CO1	L
Sol:	MOLAP	DOT AD			
Property Data structure	Multidimensional database	ROLAP Relational tables (each cell is a row)			
Data structure	A	Aciatolia taoks (cach cen is a row)			
Disk space	using sparse arrays	May not require any space other than			
Disk space	STATE OF THE PROPERTY OF THE P	-955-96 celot centerated total celescond behavior			
	cube; large for large data	that available in the data warehouse			
Retrieval	Fast(pre-computed)	Slow(computes on-the-fly)			
Scalability	Limited (cubes can be very	Excellent			
	large)				
Best suited for	Inexperienced users, limited	Experienced users, queries change			
	set of queries	frequently			
DBMS	Usually weak	Usually very strong			
facilities					
3 Explain (OLAP operations	and diagrams for Retail Sales in a multi-dimensional data M	lodel [10]	CO1	I
Sol : Exp	lain the ROLL U	P, ROLL DOWN, PIVOT, SLICE and DICE operations + diag	gram		
		f data mining, its challenges, and the process of KDD with		CO2	I
diagram	8 8	<i>S</i> ,			
	a Mining defn cl	nallenges and diagram of KDD with explanation			
Soi . Dai	a Willing Gern, Ci	lanenges and diagram of KDD with explanation			
Input	Data	Data Postprocessing Information			
Data	Preprocessing	Mining			
	Feature Selec	tion			
	Dimensionalit	y Reduction Filtering Patterns			
	Normalization	Pattern Interpretation			
	Data Subsetti	ng Tattern interpretation			
(a) Apply th	e proximity mea	sure for the following vectors X and Y, and calculate the co	sine [04]	CO2	I
		5 0 0 0 2 0 0}, Y={1 0 0 0 0 0 1 0 2}	[0.]		
Sol:	. 11- (3 2 0)				
	20500020	0)			
	2, 0, 5, 0, 0, 0, 2, 0,				
$\mathbf{y} = (1,$	0, 0, 0, 0, 0, 0, 1, 0,	2)			
$\mathbf{x} \cdot \mathbf{y} = \mathbf{i}$	3*1+2*0+0*	0 + 5 * 0 + 0 * 0 + 0 * 0 + 0 * 0 + 0 * 0 + 2 * 1 + 0 * 0 + 0 * 2 = 5			
		*0 + 5 * 5 + 0 * 0 + 0 * 0 + 0 * 0 + 2 * 2 + 0 * 0 + 0 * 0 = 6.4	3		
		*0 + 0 * 0 + 0 * 0 + 0 * 0 + 0 * 0 + 0 * 0 + 1 * 1 + 0 * 0 + 2 * 2 = 2.2			
	r) = 0.31		-		
cos(x, y	y = 0.31				
		g and Jaccard coefficient for the given problem to compute	the [06]	CO2	I
similarity	$x = \{10000$	$0\ 0\ 0\ 0\ 0\} y = \{\ 0\ 0\ 0\ 0\ 0\ 1\ 0\ 0\ 1\}$			
Sol:					
	$f_{13} + f_{00}$	0+7			
SMC =	$\frac{f_{11} + f_{00}}{f_{01} + f_{10} + f_{11} + f_{00}} =$	$=\frac{\sqrt{11}}{2+1+0+7}=0.7$			
_	fu 0				
1 7	$\frac{f_{11}}{f_{10} + f_{11}} = \frac{0}{2 + 1 + 0}$	= 0			
$J = \frac{1}{f_{01} + f_{01}}$	2 the number	r of attributes where x was 0 and y was 1			
$J = \frac{1}{f_{01} + f_{02}}$					
f01 = 2	I the number			1	
$ f01 = 2 \\ f10 = 1 $		r of attributes where x was 1 and y was 0			
$ f01 = 2 \\ f10 = 1 $					
f01 = 2 $f10 = 1$ $f00 = 2$	7 the number	r of attributes where x was 1 and y was 0 r of attributes where x was 0 and y was 0 r of attributes where x was 1 and y was 1			



Faculty Signature CCI Signature HOD Signature