| | ARYA COLLEGE OF ENGINEERING & RESEARCH CENTRE, KUKAS, Jaipur Lecture Notes Branch: Sem.: Subject: |
|------------|--|
| | Topic : Unit Lecture No |
| | Relational carculy |
| 4 | Relational conculus is a non-procedural query |
| | language. |
| > | It is also known as Declarative language. |
| - | It your mathematical pridicate (condition / rules) capeully instead of algebra. |
| -7 | Relational calculus tells what to do but never explain how to do. |
| -> | Relationey carculup provides description about the every to got the result where as relational algebra gives the method to jet the result. |
| | Types |
| | Relationary careulys |
| | |
| | Tuple Relational Domain Relational |
| | Tuple Relational Domain Relational Carculage (TRC) (DRC) |
| mi to | (TRC) (DRC) |
| Sund State | All stables to the stable of t |
| | |
| | Name of Lecturer : |

| A PULL THE STREET | Branch : | F ENGINEERING & RES Lecture Note Sem.: | s Subject | |
|-------------------|-----------------------------|--|---------------|--------------------|
| | | 0/7574 | | Allerth |
| | Tuple Relation | mal calculus (| TRC). | |
| | | | | |
| -> | Tuple Relati | may cateuly ; | 's ysed t | o selecting |
| | those tu | 12tes that s | atisfying | the given |
| | Condition | | • 0 | |
| 100 | 0.1. | | | |
| | syntax: | SE TRIBAD odo | July 13 | 3110 |
| | 3 + 1 | 2011 | D. T. William | |
| - | | p(t) | | |
| | Long | + - A rocalling | 12.010 | |
| | nere | t = resulting | rigire | |
| | p(t) = predicate (condition | | | |
| | pocurac (concina) | | | |
| LEGICAL . | - Table: Stydent | | | |
| | THE PARTY | Smily Assil | 3 (disk) - di | |
| | First-Name | Last-Name | Age | THE BUILDING |
| | 0.00 | lig. | | THE PARTY NAMED IN |
| | Ajeet | Pal | 30 | NA COLORA |
| | Rohit | Sharma | 31 | |
| | No. Co. | | 97 | |

Age is greater than 30.

{ t. Last-Name | Student (t) A t. age > 30}

Mohit

TRC .

Tupte Relational calculus is a non-procedural greery language unlike relational algebra.

In type calculus, a grey is expressed as

where t = resulting tuples,

p(t) = known of predicate (ruse/condition)

operating:

p(t) may have various conditions logically combined with OR(V), AND(A), NOT(-).

It also uses quantifiery:

· Iter (Q(t)) = " there exists" of tuple in t in relation or such that predicate Q(t) is toye.

· V ter (Q(t)) = Q(t) is true "for ay" tuplex in relation or.

Result of the query:

Last-Name Sharma

Students where Age is greater 27

[t | Student (t) 1 t. Age > 27 5

output:

| Fixst-Name | Last Name | Age |
|------------|-----------|-----|
| Ajeet | pal | 30 |
| Rohit | Sharma | 31 |
| Mohit | Sain | 28 |

| | ARYA COLLEGE OF ENGINEERING & RESEARCH CENTRE, KUKAS, Jaipur 5 Lecture Notes Sem. Subject: Topic: Unit Lecture No. |
|----------|---|
| | Unsafe expression |
| | · & s. name / - supplier (s) |
| | -> Both TRC and RA (Relational Algebra) have some expressive powers. |
| | |
| 270 | Domain Relational Contains (DRC) - |
| 7 | DRC is 9 non-procedural guery language. Domain Robitional conjecting was the same operators as tuple contailing. |
| → | related to domain relational calculus. |
| | Formal defination of DRC: |

& Lx1, x2, -, xn> | p(oc1, n2, -, xn) }

In DRC, the records one suffered based on the

| FX | ami | 1 | 10 | 3 |
|----|-----|---|------|---|
| - | 711 | 1 | 1 ve | |

Student

| | | - |
|------------|-----------|-----|
| First-Name | Last-Name | Age |
| Ajeet | pal | 30 |
| Rohit | Sharma | 31 |
| Visat | kohli | 27 |
| Mohit | Solin | 28 |

write a Overy to Sind first-Name and Age of Students where student Age is greater 27.

2 < First Name, Age > | E Student 1 Age > 27] or E < First Name, Age > | < First Name, Age > E Student 1 Age > 27 }

output:

| First-Name | Age |
|------------|-----|
| Ajeet | 30 |
| Rohit | 31 |
| Mohit | 2.8 |

| | 5 | CS) | = | | 1 |
|----|---|-----|---|-----|---|
| 13 | | * | | | 1 |
| | 4 | | | 3 | Ø |
| | | ì | ű | 200 | 1 |
| | | | | 773 | ī |
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| Branch : Lecture Notes Sem. : Unit. | Subject : Lecture No. |
|---|--|
| diff blw Relational Algebra | and Relational contenting |
| Relational Algebra | Relational Calculy |
| It is procedural - | It is non-procedural |
| Relationary Algebra tangets - how to obtain sexuet. | Relational calculus tengets what result to obtain. |
| Relational Algebra is -> related to programming language concept. | Relational calculing is met to related to programming language concept. |
| Relational Algebra specifies -> the order in which sperations are to be performed | Relational calculus not specifies the which operations are to be performs. |
| | |