ASSIGNMENT

Sub: Database Engineering (MCA01005)

Full Marks-10

Answer any two questions.

Each question carries equal marks.

Last date of submission: 31.03.2022

Q1. Discus insertion, deletion, and modification anomalies. Why are they considered bad? Illustrate with examples.

Q2. Discuss 3NF and BCNF with examples. Show that BCNF is stronger than 3NF.

Q3. Consider the following schemas.

SAILOR (*Sid, Sname, Rating, Age*)

BOAT (*Bid, Bname, Bcolor*)

RESERVE (*Sid, Bid, Date*) where Date specifies the date in which a sailor resverve a particular boat/boats.

Answer the following Queries in SQL.

a) Find the color of boats reserved by Mr. John.

b) Find the ids and names of sailors who have reserved at least two boats.

c) Find the ids, names and ratings of sailors who have reserved a red boat and a green boat.

d) Group the sailor according to their ratings and find the no. of sailors in each of these groups.

e) Assign only the sailors with rating 7 or more for reservations in the rush day 01.04.2022.

f) Find the ids, names and ratings of sailors who have reserved a red boat but not a green boat.

g) Find the age of the youngest sailor for each rating level.

h) Find the age of the youngest sailor who is eligible to vote for each rating level.

i) For each boat find the no. of reservations for this boat.

j) Find the average age of sailors for each rating level that has at least two sailors.

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