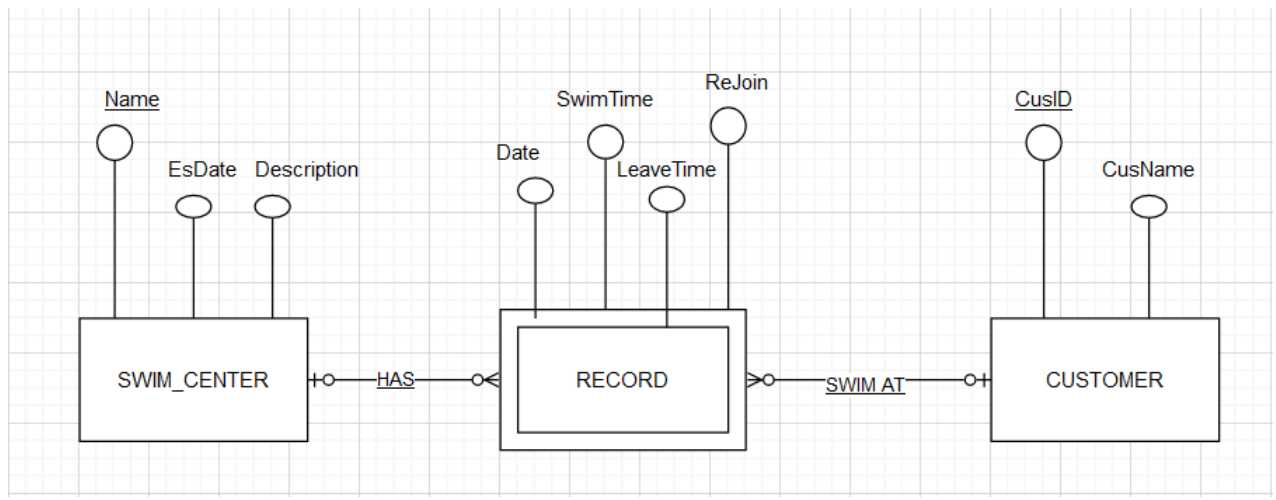**Database Analysis & Design**
INF10002

Task 5 – Credit Submission

Student Number: 103542974
Student Name: Hai Hoang Le

Credit 5a

Paste your screen capture(s) for this task here.

SWIM_CENTER (Name, EsDate, Description)

PRIMARY KEY (NAME)

CUSTOMER (CusID, CusName)

PRIMARY KEY(CusID)

RECORD (Name, CusID, Date, SwimTime, LeaveTime, Rejoin)

PRIMARY KEY (Name, CusID)

FOREIGN KEY (Name) references SWIM_CENTER

FOREIGN KEY (CusID) references CUSTOMER

SWIM_CENTER (Name, EsDate, Description)

Hoa Binh, 15/3/2023, Premium

Landmark, 23/06/2016, Middle

Bitexco, 21/8/2016, Low_cost

CUSTOMER(CusID,CusName)

2802, Hai Le

1968, Harry Potter

2023, Luccas Dio

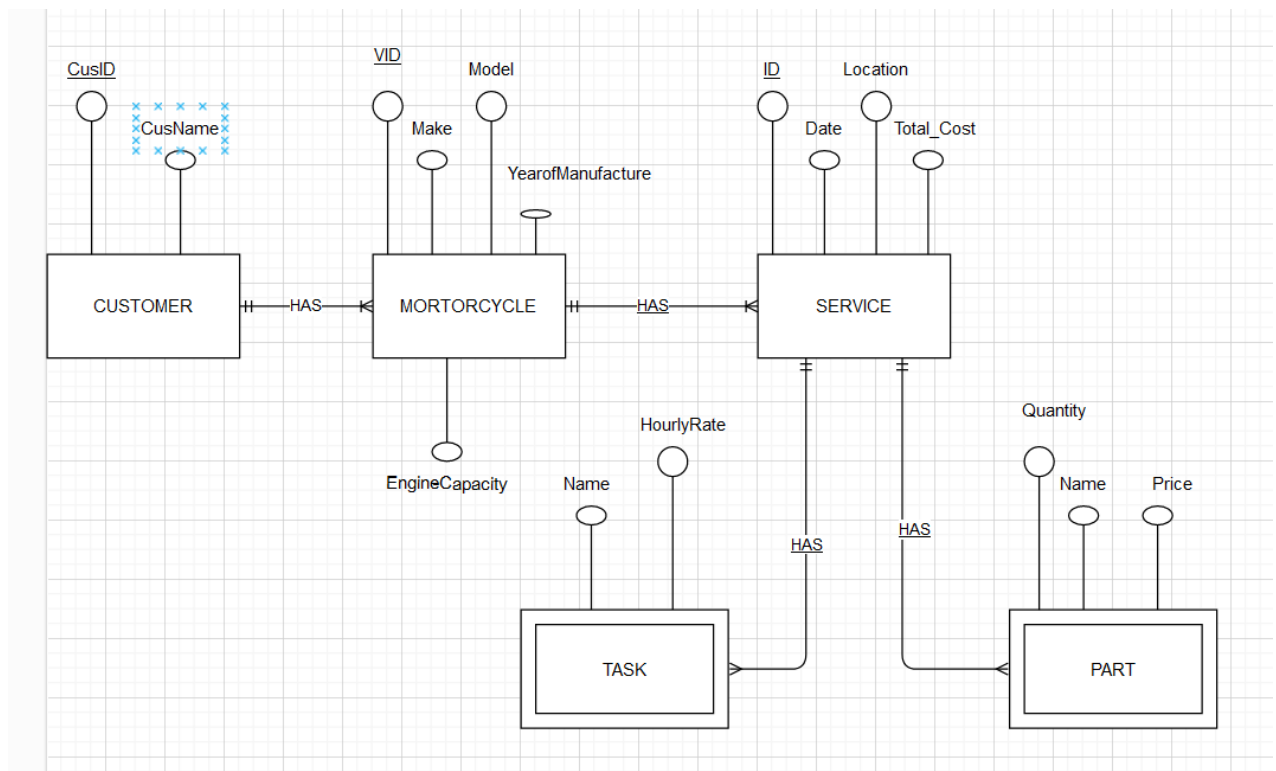RECORD (Name, CusID, Date,SwimTime,LeaveTime,Rejoin)

Hoa Binh, 2802, 2/28/2022, 1300, 1500, 14/3/2022

Landmark, 2023, 28/12/2019, 700, 830, 7/1/2022

Bitexco, 1968, 14/2/2023,1500, 2600, 15/2/2023

Credit 5b
Paste your screen capture(s) for this task here.

Credit 5c
Paste your screen capture(s) for this task here.

CUSTOMER (CusID, CusName)

PRIMARY KEY(CusID)

MORTORCYCLE (VID, Make, Model, YearofManufacture, EngineCapacity, CusID)

PRIMARY KEY (VID, CusID)

FOREIGN KEY (CusID) references CUSTOMER

SERVICE (ID, Date, Location, Total_Cost, VID)

PRIMARY KEY (VID, ID)

FOREIGN KEY (VID) references MOTORCYCLE

TASK (Name, HourlyRate, ID)

FOREIGN KEY (ID) references SERVICE

PART (Name, Quantity, Price, ID)

FOREIGN KEY (ID) references SERVICE

Credit 5d

Paste your screen capture(s) for this task here.

CREATE TABLE CUSTOMER (

  CusID INT PRIMARY KEY,

  CusName VARCHAR(50)

);

CREATE TABLE MOTORCYCLE (

  VID INT,

  Make VARCHAR(50),

  Model VARCHAR(50),

  YearofManufacture INT,

  EngineCapacity INT,

  CusID INT,

  PRIMARY KEY (VID, CusID),

  FOREIGN KEY (CusID) REFERENCES CUSTOMER(CusID)

```
);

CREATE TABLE SERVICE (
  ID INT,
  Date DATE,
  Location VARCHAR(50),
  Total_Cost DECIMAL(10, 2),
  VID INT,
  PRIMARY KEY (VID, ID),
  FOREIGN KEY (VID) REFERENCES MOTORCYCLE(VID)
);

CREATE TABLE TASK (
  Name VARCHAR(50),
  HourlyRate DECIMAL(10, 2),
  ID INT,
  FOREIGN KEY (ID) REFERENCES SERVICE(ID)
);

CREATE TABLE PART (
  Name VARCHAR(50),
  Quantity INT,
  Price DECIMAL(10, 2),
  ID INT,
  FOREIGN KEY (ID) REFERENCES SERVICE(ID)
);
```

Credit 5e

Paste your screen capture(s) for this task here.

The tables in 3NF will be

Table 1: Customer

CusId	Name	Phone
125	John Coles	0401112233
278	Erin Trump	0466121455
721	Emma Knox	0423544117

Table 2: Car

CarRego	MakeModel
1AU8HK	Mazda 3
1LM3AB	Hyundai i30
1KA2CA	Toyota
1CZ8JK	Mazda 3

Table 3: Rental

CustId	CarRego	StartDate	ReturnDate
125	1AU8HK	31/08/2020	14/11/2020
125	1LM3AB	7/09/2020	21/11/2020
278	1AU8HK	12/09/2020	1/10/2020
278	1KA2CA	10/11/2020	26/11/2020
278	1CZ8JK	12/11/2020	1/12/2020
721	1LM3AB	10/09/2020	13/09/2020

Credit 5f

Paste your screen capture(s) for this task here.

For the Purchase Transaction:

BEGIN TRANSACTION
DECLARE @prodCost money, @qtyInStock int
SELECT @prodCost = PricePerOne * ABS(ProdQty), @qtyInStock = QtyInStock - ABS(ProdQty)
FROM Product WHERE ProdID = 'G43546'
UPDATE Product SET QtyInStock = @qtyInStock WHERE ProdID = 'G43546'
COMMIT TRANSACTION

For the Return Transaction

BEGIN TRANSACTION
DECLARE @prodCost money, @qtyInStock int
SELECT @prodCost = PricePerOne * ABS(ProdQty), @qtyInStock = QtyInStock + ABS(ProdQty)
FROM Product WHERE ProdID = 'G43546'
UPDATE Product SET QtyInStock = @qtyInStock WHERE ProdID = 'G43546'
COMMIT TRANSACTION

BEGIN TRANSACTION
DECLARE @prodCost money, @qtyInStock int
SELECT @prodCost = PricePerOne * ABS(ProdQty), @qtyInStock = QtyInStock + ABS(ProdQty)
FROM Product WHERE ProdID = 'G43546'