**WS A-2 – ENTITY**

TOPIC

A

**RELATIONSHIP DIAGRAMS**



**TIME TO COMPLETE: 1 HOURS**

Please show your work, that way I know you’re able to replicate it on the exam.

***MAX MARKS: 52***

1. Define the following terms
   1. Entity [1]
   2. Attribute [1]
   3. Primary Key [1]
   4. Relationship [1]
2. For each of the following scenarios decide if the relationship is mandatory and explain your choice.
   1. Hotel guest & room reservation [2]
   2. Driver & parking permit [2]
   3. University student & graduation diploma [2]
3. Categorize each relationship as One-to-one, one-to-many, or many-to-many and explain your reasoning.
   1. Country & Capital City [2]
   2. Parent & Child [2]
   3. Photographer & Photos [2]
   4. Student & Course Materials [2]
   5. Airline & Flight Routes [2]
   6. Employee & Parking Spot [2]
   7. Podcast Host & Episodes [2]
   8. Patient & Doctor Appointments [2]
4. Given the follow database of a restaurant systems, answer the following questions:

Customer(CustomerID, name, contactInfo)

Reservation(ReservationID, date, time, tableID)

Table(TableID, capacity, location)

* 1. What kind of relationship exists between Customer and Reservation? [2]
  2. Why might the restaurant keep track of Table separately from reservation? [2]
  3. What is the primary key of the Reservation table? [2]

1. Design an ERD for a sports league database with at least three different entities. Each entity should have at least three different attributes, including a primary key. Show relationships with correct cardinality and modality. Write a short (2-3 sentence) justification for your design. [20]