**Database Design Coursework**

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**Scenario Topic Name** English Fishermen Association Social Media Platform (EFASM)

**Scenario**

The English Fishermen Association want to gather information about their members and the lakes and rivers that they visit for their new social media platform. They provide a service that allows anyone to sign-up for a membership. This can be a free or a paid membership which provides extra perks. The members are able to publish the fish they caught, and they have to provide some descriptive elements to their catch – i.e. the weight of the fish, what kind of fish it is, etc. The platform will also show the locations that people can fish at and what kind of fish can be found there.

**Example queries**

* Which members live in Chelmsford?
* List the names of members that have caught a pike on 25th of august 2021.
* Who has caught a perch that weighs more than 1kg?
* What fish can you find at the Royal Berkshire fisheries?
* Fewest used bait.
* Most caught fish species across England.
* List ALL members with a paid membership.

**Entity Relationship Model**

Diagram

Description automatically generated

**Relational Model Tables**

* Copy and paste the table below for as many relational tables as you need
* Replace the placeholder names (table-name1, attribute-name5 etc) with the table and attribute names you derived from your ER model
* List primary key attributes first
* Add new rows to the tables (in the correct place) as needed
* Delete any unnecessary rows (attribute rows and foreign key rows if not used)
* Primary keys are to be specified in the format PRIMARY KEY (attribute-name1, attribute-name2, etc)
* Foreign keys are to be specified in the format ‘FOREIGN KEY (attribute-name) REFERENCES table-name (attribute-name)

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| --- | --- |
| **Relational table specification** | **Marker’s corrections (Do not write in this column)** |
| **Table name:** Member |  |
| **Attributes** |  |
| MemberID |  |
| Name |  |
| Age |  |
| Nationality |  |
| Address |  |
| Town/City |  |
| Contact\_Info |  |
| Join\_Date |  |
| **PRIMARY KEY** MemberID |  |

|  |  |
| --- | --- |
| **Relational table specification** | **Marker’s corrections (Do not write in this column)** |
| **Table name:** Fish |  |
| **Attributes** |  |
| Scientific Name |  |
| Max\_Size(CM) |  |
| Max\_Weight(KG) |  |
| Habitat |  |
| Popularity |  |
| Location |  |
| **PRIMARY KEY** Scientific\_Name |  |

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| --- | --- |
| **Relational table specification** | **Marker’s corrections (Do not write in this column)** |
| **Table name:** Location |  |
| **Attributes** |  |
| Postcode |  |
| Name |  |
| Type |  |
| **PRIMARY KEY** Postcode |  |

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| --- | --- |
| **Relational table specification** | **Marker’s corrections (Do not write in this column)** |
| **Table name:** Member\_History |  |
| **Attributes** |  |
| MemberID |  |
| Date |  |
| Time |  |
| Location |  |
| Fish\_Caught |  |
| **PRIMARY KEY** MemberID |  |
| **FOREIGN KEY** MemberID REFERENCES Member (MemberID) |  |

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| --- | --- |
| **Relational table specification** | **Marker’s corrections (Do not write in this column)** |
| **Table name:** Paid\_Membership |  |
| **Attributes** |  |
| MemberID |  |
| Billing\_Info |  |
| Perks |  |
| Monthly\_Fee |  |
| **PRIMARY KEY** MemberID |  |
| **FOREIGN KEY** MemberID REFERENCES Member (MemberID) |  |

|  |  |
| --- | --- |
| **Relational table specification** | **Marker’s corrections (Do not write in this column)** |
| **Table name:** Free\_Membership |  |
| **Attributes** |  |
| MemberID |  |
| Free\_Perks |  |
| **PRIMARY KEY** MemberID |  |
| **FOREIGN KEY** MemberID REFERENCES Member (MemberID) |  |

|  |  |
| --- | --- |
| **Relational table specification** | **Marker’s corrections (Do not write in this column)** |
| **Table name:** Caught |  |
| **Attributes** |  |
| Date |  |
| Time |  |
| MemberID |  |
| Fish |  |
| Scientific\_Name |  |
| Weight |  |
| Postcode |  |
| Bait\_Used |  |
| Fishing\_Rod |  |
| **PRIMARY (Composite) KEY** (Date,Time) |  |
| **FOREIGN KEY** (MemberID) REFERENCES Member (MemberID) |  |
| **FOREIGN KEY** (Scientific\_Name) REFERENCES Fish (Scientific\_Name) |  |
| **FOREIGN KEY** (Postcode) REFERENCES Location (Postcode) |  |

|  |  |
| --- | --- |
| **Relational table specification** | **Marker’s corrections (Do not write in this column)** |
| **Table name:** Location\_Fish |  |
| **Attributes** |  |
| Postcode |  |
| Scientific\_Name |  |
| **PRIMARY KEY** (Postcode,Scientific\_Name) |  |
| **FOREIGN KEY** (Postcode) REFERENCES Location (Postcode) |  |
| **FOREIGN KEY** (Scientific\_Name) REFERENCES Fish (Scientific\_Name) |  |

**Marker’s Comments** (Do not write in this section)

**Important:** Please note that marker’s corrections to your relational tables are there to help you construct a working database for the second coursework. They are not the determinant of your mark. For more information on how your work is assessed see the coursework specification and grade related criteria.

**Coursework Mark** (100 marks available):