Scotland Golfers keeps handicap records of every golf club member in Scotland and the results of competitions they have played in.

They store this information, submitted from golf clubs, on two typed forms. Example forms are shown below.

**Scotland Golfer Record**

Name: Donna Winter

Scottish Golf Number: 8364766

**Age**

Junior Adult Senior

**Club**

St Andrews Golf Club

**Handicap (<= 36 or leave blank)**

**Scotland Golfer Record**

Name: Craig White

Scottish Golf Number: 9274632

**Age**

Junior Adult Senior

**Club**

Dundee Golf Club

**Handicap (<= 36 or leave blank)**

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**Record of Competition Results**

**Competition:** Aberdeen Match **Year:** 2021 **Type of Match:**

**Level:** ~~Junior~~/Adult/~~Senior~~ **Type:** ~~Ladies~~/Gents/~~Mixed~~

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Result Code | Age | Score | Handicap | Name |
| ABD0001 | Junior | 82 | 12 | Craig White |
| ABD0002 | Adult | 79 | 9 | Si Wells |
| ABD0003 | Junior | 89 | 15 | Noah Green |
| ABD0004 | Adult | 73 | 12 | Kyra Assam |
| ABD0005 | Adult | 78 | 18 | Olivia Parker |
| ABD0006 | Adult | 78 | 19 | Akeno Zhang |
| ABD0007 | Junior | 93 |  | Lucas Nguyen |
| ABD0008 | Adult | 83 | 20 | Mia Martin |
| ABD0009 | Adult | 88 | 16 | Faraji Ibrahim |
| ABD0010 | Adult | 79 | 10 | Sade Afumba |

Match Play

Stroke Play

Stableford

**Question 1 -** Scotland Golfers wish to create a relational database to store the above information. Identify two potential entity names and then list the attributes for each entity. **(4 marks)**

|  |  |
| --- | --- |
| Entity 1 Name: golfer | Entity 2 Name:results |
| Firstname  Surname  Scotgolfnum  Age  Club  handicap | Competition  Year  Matchtype  Level  Gendertype  Resultcode  Age  Score  Handicap  Firstname  surname |

**Question 2 –** You must now decide how best to organise the inputs.Draw an entity relationship diagram for a new relational database including: **(5 marks)**

* entity names & attributes
* primary and foreign keys
* the relationship
* and the cardinality

foreign key

Golfer Result



**Question 3 -** Complete a data dictionary for each of the two entities. **(9 marks)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Entity Name: golfer** | | | | | |
| **Attribute name** | **Key** | **Type** | **Size** | **Required** | **Validation** |
| Firstname | secondary | string | variable | true |  |
| Surname | secondary | string | variable | true |  |
| Sccotgolfnum | primary | int | variable | true |  |
| age | secondary | int | 3 | true |  |
| club | secondary | string | variable | true |  |
| handicap | secondary | int | 2 | false |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Entity Name: results** | | | | | |
| **Attribute name** | **Key** | **Type** | **Size** | **Required** | **Validation** |
| Resultcode | primary | string | 7 | True |  |
| Competitionanme | Secondary | string | Variable | True |  |
| Year | Secondary | int | 4 | True | Check to make sure input is greater than 3 characters, less than 5 |
| Matchtype | Secondary | string | Variable | True |  |
| Type | Secondary | string | Variable | True |  |
| Level | Secondary | string | Variable | True |  |
| Score | secondary | int | Variable | True | Check score is less than 4 characters and is a number |
| scotgolfnum | foreign | int | variable | true |  |

