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: Craig White

Scottish Golf Number: 9274632

Age

Junior Adult ☐ Senior

Club

Dundee Golf Club

Handicap (<= 36 or leave blank)

12

Scotland Golfer Record

Name: Donna Winter

Scottish Golf Number: 8364766

Age

Junior ☐ Adult Senior

Club

St Andrews Golf Club

Handicap (<= 36 or leave blank)

Record of Competition Results

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

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

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)**

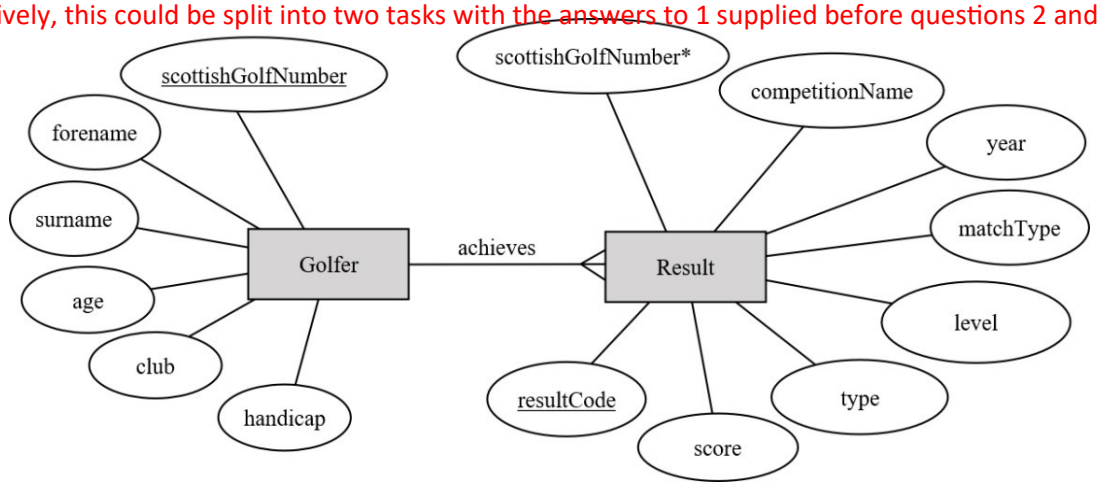
Entity 1 Name: Golfer (1 mark)	Entity 2 Name: Result (1 mark)
Forename Surname Scottish Golf Number (1 mark) Age Club Handicap Note that the attribute names don't have to exactly match the answers. Students may give the entities and attributes different names.	Result Code Competition Name Year Type of Match (1 mark)(A mark) Level Type Score Although Age, Handicap and Name are included in the competition results form, they are attributes for the other entity (golfer). Do not award this mark if they are included.

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 (2 marks - 1 for each entity and its attributes)
- primary and foreign keys (1 mark for identifying both primary keys and the foreign key)
- the relationship (1 mark for describing the relationship)
- and the cardinality (1 mark for 1 to many)

Award marks for entities and attributes according to the student's answer for question 1.

Alternatively, this could be split into two tasks with the answers to 1 supplied before questions 2 and 3.



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

Entity Name: Golfer					
Attribute name	**Key**	**Type**	**Size**	**Required**	**Validation**
scottishGolfNumber	PK	Number		Y	Range: >= 100000 and <= 999999
forename		Text	20	Y	
surname		Text	25	Y	
age		Text	6	Y	Restricted choice: Junior, Adult, Senior
club		Text	80	Y	
handicap		Number		N	Range: <=36

Entity Name: Result					
Attribute name	**Key**	**Type**	**Size**	**Required**	**Validation**
resultCode	PK	Text	7	Y	Length = 7
competitionName		Text	40	Y	
year		Number		Y	
matchType		Text	11	Y	Restricted choice: Match Play, Stroke Play, Stableford
type		Text	6	Y	Restricted choice: Ladies, Gents, Mixed
level		Text	6	Y	Restricted choice: Junior, Adult, Senior
score		Number		Y	
scottishGolfNumber	FK	Number		Y	Existing scottishGolfNumber from Golfer table

1 mark each for:

- Attribute names correct
- Two primary and one foreign key identified
- Field types correctly identified
- Sizes (the restricted choice and length fields should be exact while the others may be marked correct if they are reasonably sensible)
- Required all yes except for handicap which forms show can be left blank
- Range validation for scottishGolfNumber
- Range for handicap
- Length
- All four restricted choice fields

The validation for the FK may be assumed so has not been linked to a mark.