Using ORACLE DATABASE DATA TYPES

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| TABLE NAME | FIELD NAME | DATA TYPE | NULLS ALLOWED | PRIMARY KEY | UNIQUE | FOREIGN KEY | COMMENTS |
| USER | id | INTEGER(20) | N | Y | Y | N | auto-generated number |
|  | first\_name | VARCHAR2(50) | N | N | N | N | First name of user |
|  | middle\_name | VARCHAR2(50) | Y | N | N | N | Middle name of user |
|  | last\_name | VARCHAR2(50) | Y | N | N | N | Family name of user |
|  | email | VARCHAR2(100) | Y | N | N | N | Preferred email address to get emails |
|  | primary\_contact\_num | VARCHAR2(50) | Y | N | N | N | Most preferred contact number |
|  | secondary\_contact\_num | VARCHAR2(50) | Y | N | N | N | In case of primary contact number is not reachable |
|  | dob | DATE | Y | N | N | N | Date of Birth |

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| Table Name | Field  Name | Data Type | Nulls Allowed | Primary Key | Unique | Foreign Key | Comments |
| USER\_ADDRESS | user\_id | INTEGER(20) | N | Y | N | USER.id |  |
|  | address\_id | INTEGER(20) | N | Y | N | ADDRESS.id |  |

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| Table Name | Field  Name | Data Type | Nulls Allowed | Primary Key | Unique | Foreign Key | Comments |
| ADDRESS | id | INTEGER(20) | N | Y | Y | N | Auto-generated number |
|  | street1 | VARCHAR2(100) | N | N | N | N |  |
|  | street2 | VARCHAR2(100) | Y | N | N | N |  |
|  | city | VARCHAR2(50) | N | N | N | N |  |
|  | state | VARCHAR2(50) | N | N | N | N |  |
|  | county | VARCHAR2(50) | Y | N | N | N |  |
|  | zipcode | VARCHAR2(10) | N | N | N | N | Five digit number |
|  | country | VARCHAR2(100) | Y | N | N | N |  |

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| TABLE NAME | FIELD NAME | DATA TYPE | NULLS ALLOWED | PRIMARY KEY | UNIQUE | FOREIGN KEY | COMMENTS |
| USER\_INTEREST | user\_id | INTEGER(20) | N | Y | Y | USER.id |  |
|  | interest\_id | INTEGER(20) | N | Y | Y | INTEREST.id |  |

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| TABLE NAME | FIELD NAME | DATA TYPE | NULLS ALLOWED | PRIMARY KEY | UNIQUE | FOREIGN KEY | COMMENTS |
| INTEREST | id | INTEGER(20) | N | Y | Y | N | Autogenerated number |
|  | name | VARCHAR2(100) | N | N | N | N | Name for interest (e.g painting the wall) |
|  | Description | VARCHAR2(300) | Y | N | N | N | More detail about interest name if required |

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| TABLE NAME | FIELD NAME | DATA TYPE | NULLS ALLOWED | PRIMARY KEY | UNIQUE | FOREIGN KEY | COMMENTS |
| Recent\_Education | id | INTEGER(20) | N | Y | Y | N | Autogenerated number |
|  | education\_level | VARCHAR2(100) | N | N | N | N | (e.g Masters in Computer Science) |
|  | user\_id | INTEGER(20) | Y | N | Y | USER.id |  |

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| TABLE NAME | FIELD NAME | DATA TYPE | NULLS ALLOWED | PRIMARY KEY | UNIQUE | FOREIGN KEY | COMMENTS |
| Expertise | id | INTEGER(20) | N | Y | Y | N | Autogenerated number |
|  | Expertise\_area | VARCHAR2(100) | N | N | N | N | Name for expertise(e.g. art restoration) |
|  | user\_id | INTEGER(20) | Y | N | Y | USER.id |  |
|  | Skill\_id | INTEGER(20) | Y | N | Y | SKILL.id |  |

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| TABLE NAME | FIELD NAME | DATA TYPE | NULLS ALLOWED | PRIMARY KEY | UNIQUE | FOREIGN KEY | COMMENTS |
| SKILL | id | INTEGER(20) | N | Y | Y | N | Autogenerated number |
|  | name | VARCHAR2(100) | N | N | N | N |  |
|  | description | VARCHAR2(300) | Y | N | N | N |  |

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| TABLE NAME | FIELD NAME | DATA TYPE | NULLS ALLOWED | PRIMARY KEY | UNIQUE | FOREIGN KEY | COMMENTS |
| ROLE | id | INTEGER(20) | N | Y | Y | N | Autogenerated number |
|  | name | VARCHAR2(50) | N | N | Y | N | Specific role name (volunteer, donor, user, admin) |
|  | description | VARCHAR2(300) | Y | N | N | N | Comment on name |

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| TABLE NAME | FIELD NAME | DATA TYPE | NULLS ALLOWED | PRIMARY KEY | UNIQUE | FOREIGN KEY | COMMENTS |
| USER\_ROLE | role\_id | INTEGER(20) | N | Y | N | ROLE.id |  |
|  | User\_id | VARCHAR2(50) | N | Y | N | USER.id |  |

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| TABLE NAME | FIELD NAME | DATA TYPE | NULLS ALLOWED | PRIMARY KEY | UNIQUE | FOREIGN KEY | COMMENTS |
| ANSWER\_SELECTED | id | INTEGER(20) | N | Y | Y | N | Autogenerated number |
|  | correct\_answer | VARCHAR2(100) | Y | N | N | N | Correct answer for particular survey and question of that survey by a user |
|  | user\_id | VARCHAR2(300) | N | N | N | USER.id |  |
|  | survey\_id | INTEGER(20) | N | N | Y | SURVEY.id |  |
|  | question\_id | INTEGER(20) | N | N | Y | QUESTION.id |  |

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| TABLE NAME | FIELD NAME | DATA TYPE | NULLS ALLOWED | PRIMARY KEY | UNIQUE | FOREIGN KEY | COMMENTS |
| QUESTION | id | INTEGER(20) | N | Y | Y | N | Autogenerated number |
|  | question\_type | VARCHAR2 (20) | N | N | N | N | Question type can be select or text |
|  | description | VARCHAR2(200) | Y | N | N | N | Details for question type if needed |

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| TABLE NAME | FIELD NAME | DATA TYPE | NULLS ALLOWED | PRIMARY KEY | UNIQUE | FOREIGN KEY | COMMENTS |
| ANSWER\_OPTION | id | INTEGER(20) | N | Y | Y | N | Autogenerated number |
|  | name | VARCHAR2 (20) | N | N | N | N | Answer type(select or text) |
|  | description | VARCHAR2(200) | Y | N | N | N | anwer |

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| Table Name | Field  Name | Data Type | Nulls Allowed | Primary Key | Unique | Foreign Key | Comments |
| SURVEY\_QUESTION | question\_id | INTEGER(20) | N | Y | N | QUESTION.id |  |
|  | survey\_id | INTEGER(20) | N | Y | N | SURVEY.id |  |

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| Table Name | Field Name | Data Type | Nulls Allowed | Primary Key | Unique | Foreign Key | Comments |
| SURVEY | id | INTEGER(20) | N | Y | Y | N | Autogenerated number |
|  | name | VARCHAR2(100) | N | N | N | N | Title for survey |
|  | date\_created | DATE | N | N | N | N | Created date of survey |
|  | question\_id | INTEGER(20) | Y | N | N | QUESTION.id | Question id of the questions that are added to this survey |

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| Table Name | Field  Name | Data Type | Nulls Allowed | Primary Key | Unique | Foreign Key | Comments |
| USER\_SURVEY | user\_id | INTEGER(20) | N | Y | Y | USER.id |  |
|  | date\_created | DATE | N | N | N | N |  |
|  | question\_id | INTEGER(20) | N | N | N | QUESTION.id |  |

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| Table Name | Field  Name | Data Type | Nulls Allowed | Primary Key | Unique | Foreign Key | Comments |
| USER\_SCHOOL | user\_id | INTEGER(20) | N | Y | N | USER.id |  |
|  | school\_id | INTEGER(20) | N | Y | N | SCHOOL.id |  |

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| Table Name | Field  Name | Data Type | Nulls Allowed | Primary Key | Unique | Foreign Key | Comments |
| SCHOOL | id | INTEGER(20) | N | Y | Y | N | Autogenerated number |
|  | name | VARCHAR2(100) | N | N | Y | N | Name of school |
|  | contact\_number | VARCHAR2(50) | N | N | Y | N | Work phone of the school |
|  | address\_id | INTEGER(20) | N | N | N | ADDRESS.id | Address associated with this school |

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| Table Name | Field  Name | Data Type | Nulls Allowed | Primary Key | Unique | Foreign Key | Comments |
| MEMBERSHIP\_LEVEL | id | INTEGER(20) | N | Y | Y | N | Autogenerated number |
|  | member\_level | VARCHAR2(20) | N | N | N | N | Different membership level(life, founders, pioneer, family, general) |
|  | amount | INTEGER(10) | Y | N | N | N | Price for that particular membership |

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| Table Name | Field  Name | Data Type | Nulls Allowed | Primary Key | Unique | Foreign Key | Comments |
| MEMBERSHIP | id | INTEGER(20) | N | Y | Y | N | Autogenerated number |
|  | start\_date | DATE | Y | N | N | N | Start date for the membership |
|  | end\_date | DATE | Y | N | N | N | Estimated end date for the particular member\_level type |
|  | membership\_level\_id | INTEGER(20) | N | N | N | MEMBERSHIP\_LEVEL.id | Associated Id of membership\_level |
|  | user\_id | INTEGER(20) | N | N | N | USER.id | Associated user to this membership |

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| Table Name | Field  Name | Data Type | Nulls Allowed | Primary Key | Unique | Foreign Key | Comments |
| EVENT | id | INTEGER(20) | N | Y | Y | N | Autogenerated number |
|  | name | VARCHAR2(100) | N | N | N | N | Title for the event |
|  | description | VARCHAR(300) | Y | N | N | N | Overview of what event is about |
|  | start\_date | DATETIME | N | N | N | N | Start date and time of the event |
|  | end\_date | DATETIME | N | N | N | N | End date and time of the event |
|  | location\_id | INTEGER(20) | N | N | N | ADDRESS.id | Address id associated where event is going to be held |

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| Table Name | Field  Name | Data Type | Nulls Allowed | Primary Key | Unique | Foreign Key | Comments |
| USER\_EVENT | id | INTEGER(20) | N | Y | Y | N | Autogenerated number |
|  | user\_id | INTEGER(20) | N | N | N | USER.id | Id of the user participating in the event |
|  | event\_id | INTEGER(20) | N | N | N | Event.id | Event id associated |
|  | role\_id | INTEGER(20) | N | N | N | ROLE.id | Role for the particular user |

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| Table Name | Field  Name | Data Type | Nulls Allowed | Primary Key | Unique | Foreign Key | Comments |
| USER\_DONATION | donation\_id | INTEGER(20) | N | Y | N | DONATION.id |  |
|  | user\_id | INTEGER(20) | N | Y | N | USER.id |  |

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| Table Name | Field  Name | Data Type | Nulls Allowed | Primary Key | Unique | Foreign Key | Comments |
| DONATION | id | INTEGER(20) | N | Y | Y | N | Autogenerated number |
|  | monetary\_value | NUMBER(10,2) | Y | N | N | N | Amount in dollars |
|  | date | DATE | Y | N | N | N | Donated date |
|  | type | VARCHAR2(50) | Y | N | N | N | Donation type(money or assets) |
|  | description | VARCHAR2(150) | Y | N | N | N | Details about the donation |

Index part:

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| **Index Name** | **Index Type** | **Table Name** | **Field(s)** | **Reason** |
| idx\_user\_last\_name | Non-Unique | User | last\_name | last\_name are used quite often to fetch user |
| idx\_user\_last\_name\_first\_name | Non-Unique | User | last\_name,first\_name | User's are searched using Full Name |
| idx\_interest\_name | Non-Unique | Interest | Name | Interests are searched by name |
| idx\_user-id | Non-Unique | Recent\_Education | user-id | To find education\_level of a User |
| idx\_skill\_user\_id | Non-Unique | Expertise | skill\_id, user\_id | To find Expertise Area of a User |
| idx\_skill\_name | Non-Unique | Skill | skill\_name | To find Skill |
| idx\_user\_survey\_id | Non-Unique | Answer\_selected | user\_id,survey\_id | To find answers for a Survey taken by User |
| idx\_date\_created\_survey | Non-Unique | Survey | date\_created | To find surveys by date |
| idx\_school\_name | Non-Unique | School | Name | To find School by name |
| idx\_membership\_user\_id | Non-Unique | Membership | user\_id | To find membership of a user |
| idx\_event\_name | Non-Unique | Event | Name | To find Event by name |
| idx\_event\_start\_date | Non-Unique | Event | start\_date | To find Event by date |
| idx\_event\_user\_id | Non-Unique | User\_Event | user\_id | To find Events for a user |

View part:

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ParticipantInEvent View \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

VIEW name: ParticipantInEvent -- to show the participants of an event

SQL:

CREATE VIEW ParticipantInEvent AS

SELECT u.first\_name, u.last\_name,ue.name as EventName

FROM User u

INNER JOIN User\_Event ue ON (u.id= ue.user\_id)

INNER JOIN Event e ON ( ue.event\_id = e.id);

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* end of ParticipantInEvent View \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Donation view \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

VIEW name: DonationList -- to show the list of donation

SQL:

CREATE VIEW DonationList AS

SELECT u.first\_name, u.last\_name, d.monetary\_value

FROM User u

INNER JOIN User\_Donation ud ON (u.id= ud.user\_id)

INNER JOIN Donation d ON ( ud.donation\_id = d.id)

ORDER BY d.monetary\_value DESC;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* end of Donation view \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Membership view \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

VIEW name: MembershipList -- to show the list of members and their level

SQL:

CREATE VIEW MembershipList AS

SELECT u.first\_name, u.last\_name, ml.member\_level

FROM User u

INNER JOIN Membership m ON (u.id= m.user\_id)

INNER JOIN Membership\_Level ml ON ( ml.id = m.membership\_level\_id)

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* end of Membership view \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* UserInterestsView \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

VIEW name: UserInterests -- to show the users specific interests

SQL:

CREATE VIEW UserInterests AS

SELECT u.first\_name, u.last\_name,i.name as UserInterest

FROM User u

INNER JOIN User\_Interest ui ON (u.id= ui.user\_id)

INNER JOIN Interest i ON ( ui.interest\_id = i.id);

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* end of UserInterestsView \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* UserSurveyList\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

VIEW name: UserSurveyList -- to show the surveys taken by users

SQL:

CREATE VIEW UserSurveyList AS

SELECT u.first\_name, u.last\_name,s.name as UserSurveyList

FROM User u

INNER JOIN User\_Survey us ON (u.id= us.user\_id)

INNER JOIN Survey s ON ( us.survey\_id = s.id);

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* end of UserSurveyList \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/