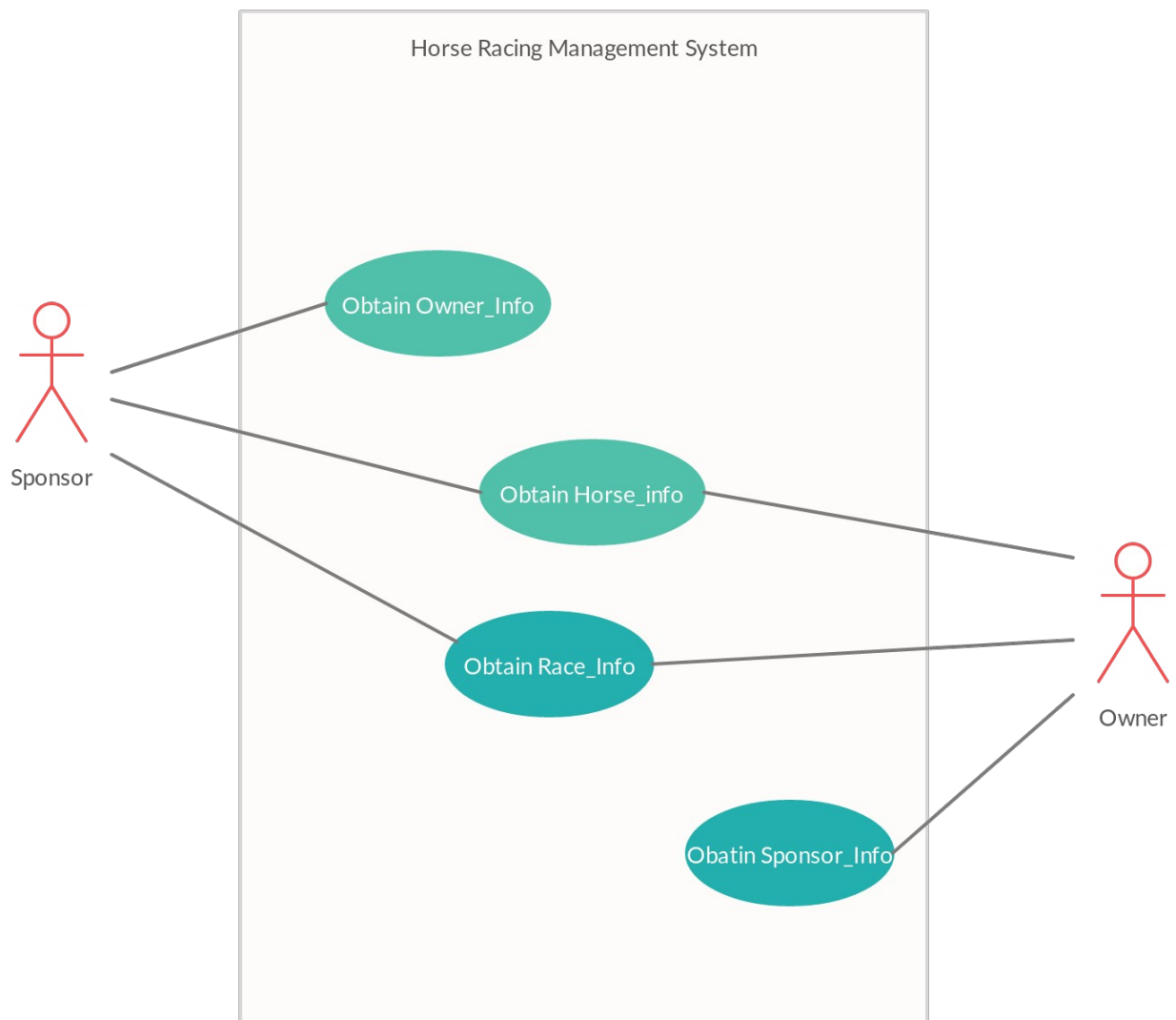


Project Analysis and Design Document

1. Use Case Diagram



2. Use Case Description

Use Case Id: 0001

Use Case Name: Obtain Owner_Info

Description: Gives detailed information about the different horse owners.

Actors: Sponsor

Normal Flow: The actor indicates that he wants information about the different horse owners.
So the system loads this information from it's database.

Use Case Id: 0002

Use Case Name: Obtain Sponsor_Info

Description: Gives detailed information about the different sponsors.

Actors: Owner

Normal Flow: The actor indicates that he wants information about the different sponsors.
So the system loads this information from it's database.

Use Case Id: 0003

Use Case Name: Obtain Horse_Info

Description: A table is returned which has information about each horse that has been registered. More specifically, each record contains details about the physical conditions, corresponding owner, sponsor and basic race stats.

Actors: Sponsor, Owner

Normal Flow: The actor indicates that he wants information about each horse.

So the system loads this information from it's database.

Use Case Id: 0004

Use Case Name: Obtain Race_Info

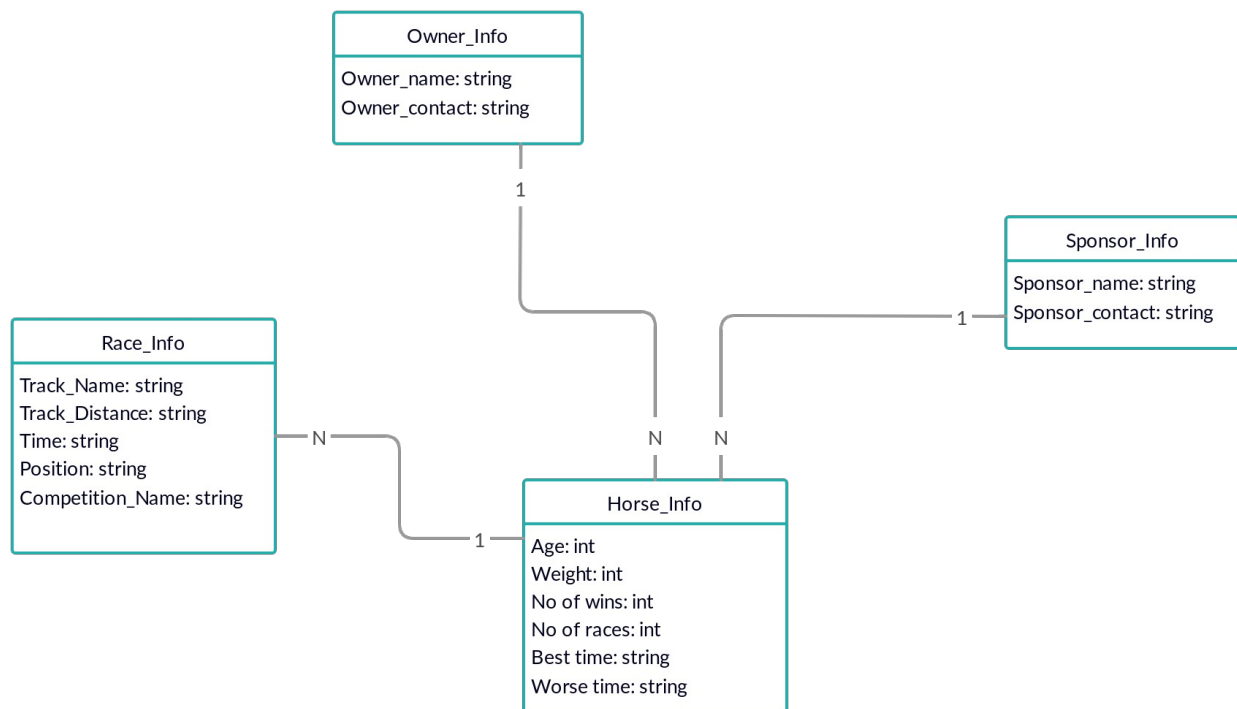
Description: A table is returned where each record has finer details about the racing track , time and position of a particular horse.

Actors: Sponsor, Owner

Normal Flow: The actor indicates that he wants racing information.

So the system loads this information from it's database.

3. UML class Diagram:



4. Relational Tables:

Table Name: Owner_Info

Name of Column	Data Type	Constraints
Owner_Info_Id	string	PK,surrogate
Owner_name	string	
Owner_contact	string	

Table Name: Sponsor_Info

Name of Column	Datatype	Constraints
Sponsor_Info_Id	string	PK,surrogate
Sponsor_name	string	
Sponsor_Contact	string	

Table Name: Horse_Info

Name of Column	Datatype	Constraints
Horse_Info_Id	string	PK,surrogate
Owner_id	string	FK references Owner_Info_Id,NOT NULL
Sponsor_id	string	FK references Sponsor_Info_Id,NULL
Age	int	
Weight	int	
No of wins	int	
No of races	int	
Best Time	string	
Worse Time	string	

Table Name:Race_Info

Name of column	Datatype	Constraints
Race_Info_Id	string	PK,surrogate
Horse_Id	string	FK references Horse_Info_Id,NOT NULL
Track_Name	string	
Track_Distance	string	
Time	string	
Position	string	
Competiton_Name	string	

Pictures of different functionalities:

Note: display_owners, display_sponsors, display_horses, display_races only display the primary keys of their respective tables to minimize the amount of columns that appear on the screen.

```
1 package HorseRacingManagement.IMT2017042;
2
3 import java.util.HashSet;
```

```
Dec 08, 2019 3:34:51 PM org.hibernate.annotations.common.reflection.java.JavaReflectionManager <clinit>
INFO: HCNAN000001: Hibernate Commons Annotations (5.0.4.Final)
Dec 08, 2019 3:34:51 PM org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProviderImpl configure
WARN: HHM10001802: Using Hibernate built-in connection pool (not for production use!)
Dec 08, 2019 3:34:51 PM org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProviderImpl buildCreator
INFO: HHM10001805: Loading class 'com.mysql.jdbc.Driver'. This is deprecated. The new driver class is 'com.mysql.cj.jdbc.Driver'. The driver is automatically registered via the SPI and manual loading of the driver class is discouraged.
Dec 08, 2019 3:34:51 PM org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProviderImpl buildCreator
INFO: HHM10001801: Connection properties: (user=sushrath, password=****)
Dec 08, 2019 3:34:51 PM org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProviderImpl buildCreator
INFO: HHM10001803: Autocommit mode: false
Dec 08, 2019 3:34:51 PM org.hibernate.engine.jdbc.connections.internal.DriverManagerConnectionProviderImpl buildCreator
INFO: HHM000115: Hibernate connection pool size: 20 (min=1)
Dec 08, 2019 3:34:52 PM org.hibernate.dialect.Dialect <init>
INFO: HHM000400: Using dialect: org.hibernate.dialect.MySQLDialect
Press 5 to exit
User
Owner
Press -1 to create new account
If you already have an account, then enter your id
Press -2 to exit
5
Help
Type add Horse to insert a new horse record
Type add Race to insert a new race record
Type remove Race to remove a new record
Type remove Horse to remove a horse record
Type remove Owner to remove an owner record
Type obtain Sponsorid to receive the sponsor id of the horse
Type obtain Raceid to receive the all raceids of the horse
Type display_owners to receive all the owner records
Type display_horses to receive all the horse records
Type display_races to receive all the race records
Type exit to logout
display_races
Dec 08, 2019 3:35:31 PM org.hibernate.hql.internal.QueryTranslatorFactoryInitiator initiateService
INFO: HHM000397: Using ASTQueryTranslatorFactory
31
32
display_horses
3
8
```

```
exit
Press -1 to create new account
If you already have an account, then enter your id
Press -2 to exit
-1
Enter new id
20
New Owner successfully created
add_Horse
17
Horse added successfully
add_Horse
18
Horse added successfully
display_horses
17
18
3
8
add_Race
18
```

