North-West University |

Assignment 3

CMPG 213

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Scope for National Park

The system must include functionality for the following:

* Maintenance of animals (Increasing and decreasing).
* Maintenance of guests.
* Make a booking,
* Cancel a booking.
* Change a booking.
* Buying of animals.
* Detailed reporting such as: Monthly expenses and income report, Client report, Animal report],Past transactions report, Endangered species report. Reports income per time period.

Use-Case Model for National Park

National Park System

Log into System

Maintain Animals

Icon

Description automatically generated  **Administrator**

Data Model for National Park

|  |  |
| --- | --- |
| GUESTS | |
| PK | Guest\_ID |
|  | Guest\_Name |
|  | Guest\_Surname |
|  | isChecked\_in |
|  |  |

|  |  |
| --- | --- |
| ANIMALS | |
| PK | Animal\_ID |
|  | Animal\_Type |
|  | Animal\_Endangered |
|  | Animal\_Sold |
|  | Animal\_Bought |
| FK | Animal\_Report |
|  |  |

|  |  |
| --- | --- |
| BOOKING | |
| PK | Booking\_ID |
|  | Booking\_Date |
|  | Booking\_Payment |
|  | Guest\_Arrival |
|  | Guest\_Departure |
| FK1 | House\_Number |
| FK2 | Guest\_ID |
|  |  |

|  |  |
| --- | --- |
| GUEST\_HOUSE | |
| PK | House\_Number |
|  | House\_Type |
|  |  |

Process Model for Maintain Bookings

System User

Booking\_Date

Guests’ Requested Booking

Maintain Bookings

**New Booking:**

**Cancel Booking:**

**Change Booking: (Read)**

1{Booking\_Date + Cancelled\_Booking + Changed\_Booking + Booking\_Payment + Guest\_Arrival + Guest\_Departure + House\_Number + Guest\_ID }N

1{ House\_Number + House\_Price + House\_Type N

1{ Booking\_ID + Booking\_Date + Cancelled\_Booking + Changed\_Booking + Booking\_Payment + Guest\_Arrival + Guest\_Departure + House\_Number + Guest\_ID }N

1{Booking\_ID}N

|  |  |
| --- | --- |
| D3 | Guest House |

|  |  |
| --- | --- |
| D2 | Guests |

1{ Guest\_ID + Guest\_Name + Guest\_Surname }N

|  |  |
| --- | --- |
| D1 | Booking |

**Change Booking: (Write)**

1{Booking\_ID + Booking\_Date + Cancelled\_Booking + Changed\_Booking + Booking\_Payment + Guest\_Arrival + House\_Number + Guest\_ID }N

Process Model for Maintain Animals

System User

Animal\_Type, Animal\_Endangered

Maintain Animals

**Add Animal: (Bought)**

1{Animal\_Type + Animal\_Endangered + Animal\_Sold + Animal\_Bought }N

**Remove Animal: (Sold)**

1{Animal\_ID}N

|  |  |
| --- | --- |
| D4 | Animals |

Process Model for Maintain Guests

System User

1{ Guest\_Name + Guest\_Surname }N

Request to Maintain Guests’ Details

Maintain Guests

1{ Guest\_ID + Guest\_Arrival + Guest\_Departure}N

**New Guest:**

**Delete Guest:**

1{Guest\_Name + Guest\_Surname }N

1{Guest\_ID}N

|  |  |
| --- | --- |
| D1 | Booking |

|  |  |
| --- | --- |
| D2 | Guests |