

**DATABASE ASSIGNMENT**

**Group : 18**



**NAMI PR1 Database Design 18**

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| --- | --- | --- | --- | --- | --- | --- |
| **Course: B.Sc. Computing** | | | **Year: 1** | | **CSY1026 : Database 1** | |
| **TCA No:2** | | **Title: Database Development** | | | | |
| Date due out:  13-JUL-2018 | Date due in:  13-JUL-2018 | | | Extension date: | | Extension agreed by: |
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7. **TABLE CREATION**

We created 12 tables altogether as given in the assignment. Here, are the

list of 12 tables :-

1. teams
2. customers
3. locations
4. extras
5. campers
6. staff
7. pitches
8. bookings
9. confirmations
10. payments
11. receipts
12. booking\_details

**Number of Tables:** 12

1. **SEQUENCE CREATION**

We created 11 sequences altogether as per the requirement. Here, are the

list of all 11 sequences :-

1. seq\_teams
2. seq\_customers
3. seq\_locations
4. seq\_extras
5. seq\_campers
6. seq\_staff
7. seq\_pitches
8. seq\_bookings
9. seq\_confirmations
10. seq\_payments
11. seq\_receipts

**Number of sequences :** 11

1. **CONSTRAINT CREATION**
   1. **PRIMARY KEYS**

We created 12 primary keys altogether as per the requirement. We had also created two compound primary keys. So,here are the list of all 12 primary keys :-

1. pk\_teams
2. pk\_customers
3. pk\_locations
4. pk\_extras
5. pk\_campers
6. pk\_staff
7. pk\_pitches
8. pk\_bookings
9. pk\_confirmations
10. pk\_payments (compound primary key (booking\_id, cus\_id))
11. pk\_receipts
12. pk\_booking\_details (compound primary (booking\_id, extra\_id, pitches\_id, camper\_id))

**Number of primary keys:** 12

**3.2 FOREIGN KEYS**

We created 12 foreign keys altogether as per the requirement. We had also created one compound foreign keys. So,here are the list of all 12 foreign keys :-

1. fk\_s\_teams
2. fk\_p\_locations
3. fk\_b\_staff
4. fk\_b\_customers
5. fk\_c\_bookings
6. fk\_p\_bookings
7. fk\_p\_customers
8. fk\_r\_payments (compound foreign key (booking\_id, cus\_id))
9. fk\_bd\_bookings
10. fk\_bd\_campers
11. fk\_bd\_pitches
12. fk\_bd\_extras

**Number of foreign keys:** 12

**3.3 CHECK CONSTRAINT**

We created 24 check constraints altogether. So,here are the list of all 24 check constraints :-

Customers table

1. ck\_cus\_firstname
2. ck\_cus\_lastname
3. ck\_street\_name
4. ck\_city
5. ck\_customer\_country

Locations table

* 1. ck\_location\_city
  2. ck\_province
  3. ck\_location\_country

Campers table

* 1. ck\_camper\_type
  2. ck\_category
  3. ck\_description

Staff table

1. ck\_staff\_firstname
2. ck\_staff\_lastname
3. ck\_staff\_street\_name
4. ck\_staff\_city
5. ck\_staff\_country

Pitches table

1. ck\_pitch\_type
2. ck\_theme
3. ck\_payments
4. ck\_customer\_gender
5. ck\_staff\_gender
6. ck\_hookup
7. ck\_confirmations
8. ck\_payment\_mode(this constraint is disabled afterwards)
9. **ORDER OF DELETION**

Here are the order of deletion of all the keys and tables along with deletion of

Sequences :-

* 1. **FOREIGN KEYS**

1. fk\_bd\_bookings
2. fk\_bd\_campers
3. fk\_bd\_pitches
4. fk\_bd\_extras
5. fk\_r\_payments
6. fk\_b\_staff
7. fk\_b\_customers
8. fk\_p\_bookings
9. fk\_p\_customers
10. fk\_s\_teams
11. fk\_p\_locations
12. fk\_c\_bookings

**4.2 PRIMARY KEYS**

1. pk\_booking\_details
2. pk\_receipts
3. pk\_confirmations
4. pk\_pitches
5. pk\_campers
6. pk\_extras
7. pk\_payments
8. pk\_locations
9. pk\_bookings
10. pk\_customers
11. pk\_staff
12. pk\_teams

**4.3 SEQUENCE DELETION**

1. seq\_teams
2. seq\_customers
3. seq\_locations
4. seq\_extras
5. seq\_campers
6. seq\_staff
7. seq\_pitches
8. seq\_bookings
9. seq\_confirmations
10. seq\_payments
11. seq\_receipts

**4.4 TABLE DROPS**

1. booking\_details
2. receipts
3. confirmations
4. pitches
5. campers
6. extras
7. payments
8. locations
9. bookings
10. customers
11. staff
12. teams
13. **TABLE SPECIFICATION**

**TEAMS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ATTRIBUTE | DATATYPE | CONSTRAINT | DEFAULT | SEQUENCE |
| team\_id | NUMBER(2) | pk\_teams |  | seq\_teams |
| department\_name | VARCHAR2(15) | NOT NULL |  |  |
| contact\_number | VARCHAR2(20) | NOT NULL |  |  |

**CUSTOMERS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ATTRIBUTE | DATATYPE | CONSTRAINT | DEFAULT | SEQUENCE |
| cus\_id | NUMBER(7) | pk\_customers |  | seq\_customers |
| cus\_firstname | VARCHAR2(20) | UPPER |  |  |
| cus\_lastname | VARCHAR2(20) | UPPER |  |  |
| date\_of\_birth | DATE |  |  |  |
| gender | CHAR(1) | CHECK IN (‘M’,’F’) | ‘M’ |  |
| email\_id | VARCHAR2(30) | UNIQUE |  |  |
| phone\_number | VARCHAR2(20) | NOT NULL |  |  |
| street\_name | VARCHAR2(20) | UPPER |  |  |
| city | VARCHAR2(15) | UPPER |  |  |
| country | VARCHAR2(15) | UPPER |  |  |
| postal\_code | VARCHAR2(5) |  |  |  |

**LOCATIONS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ATTRIBUTE | DATATYPE | CONSTRAINT | DEFAULT | SEQUENCE |
| location\_id | NUMBER(8) | pk\_locations |  | seq\_locations |
| locaton\_name | VARCHAR2(20) | NOT NULL |  |  |
| city | VARCHAR2(15) | UPPER |  |  |
| province | VARCHAR2(15) | UPPER |  |  |
| country | VARCHAR2(15) | UPPER |  |  |

**EXTRAS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ATTRIBUTE | DATATYPE | CONSTRAINT | DEFAULT | SEQUENCE |
| extra\_id | NUMBER(4) | pk\_extras |  | seq\_extras |
| extra\_type | VARCHAR2(20) |  |  |  |
| price | NUMBER(7,2) |  |  |  |

**CAMPERS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ATTRIBUTE | DATATYPE | CONSTRAINT | DEFAULT | SEQUENCE |
| camper\_id | NUMBER(4) | pk\_campers |  | seq\_campers |
| camper\_type | VARCHAR2(15) | UPPER |  |  |
| category | VARCHAR2(10) | UPPER |  |  |
| description | VAECHAR2(75) | UPPER |  |  |

**STAFF**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ATTRIBUTE | DATATYPE | CONSTRAINT | DEFAULT | SEQUENCE |
| staff\_id | NUMBER(4) | pk\_staff |  | seq\_staff |
| staff\_firstname | VARCHAR2(20) | UPPER |  |  |
| staff\_lastname | VARCHAR2(20) | UPPER |  |  |
| date\_of\_birth | DATE |  |  |  |
| gender | CHAR(1) | CHECK IN (‘M’,’F’) | ’M’ |  |
| email\_id | VARCHAR2(30) | UNIQUE |  |  |
| phone\_number | VARCHAR2(20) | NOT NULL |  |  |
| fax\_number | VARCHAR(15) | UNIQUE |  |  |
| street\_name | VARCHAR2(20) | UPPER |  |  |
| city | VARCHAR2(15) | UPPER |  |  |
| country | VARCHAR2(15) | UPPER |  |  |
| joined\_date | DATE | NOT NULL |  |  |
| \*team\_id | NUMBER(2) | NOT NULL,  fk\_s\_teams |  |  |

**PITCHES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ATTRIBUTE | DATATYPE | CONSTRAINT | DEFAULT | SEQUENCE |
| pitch\_id | NUMBER(4) | pk\_pitches |  | seq\_pitches |
| pitch\_type | VARCHAR2(20) | UPPER |  |  |
| hookup | VARCHAR2(7) | CHECK IN (‘PARTIAL’,’FULL’) |  |  |
| area\_sqkm | NUMBER(5) |  |  |  |
| theme | VARCHAR2(15) | UPPER |  |  |
| price | NUMBER(7,2) |  |  |  |
| \*location\_id | NUMBER(8) | NOT NULL,  fk\_p\_locations |  |  |

**BOOKINGS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ATTRIBUTE | DATATYPE | CONSTRAINT | DEFAULT | SEQUENCE |
| booking\_id | NUMBER(4) | pk\_bookings |  | seq\_bookings |
| booking\_date | DATE |  | SYSDATE |  |
| advance\_payment | NUMBER(7,2) |  |  |  |
| departure | DATE | NOT NULL |  |  |
| arrival | DATE |  |  |  |
| due\_date | DATE |  | SYSDATE+15 |  |
| \*staff\_id | NUMBER(4) | NOT NULL, fk\_b\_staffs |  |  |
| \*cus\_id | NUMBER(7) | NOT NULL, fk\_b\_customers |  |  |

**CONFIRMATIONS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ATTRIBUTE | DATATYPE | CONSTRAINT | DEFAULT | SEQUENCE |
| confirmation\_id | NUMBER(4) | pk\_confirmations |  | seq\_confirmations |
| confirm\_date | DATE |  |  |  |
| cancellation | CHAR(1) | CHECK IN (‘Y’,’N’) | ’N’ |  |
| \*booking\_id | NUMBER(4) | NOT NULL, fk\_c\_bookings |  |  |

**PAYMENTS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ATTRIBUTE | DATATYPE | CONSTRAINT | DEFAULT | SEQUENCE |
| \*booking\_id | NUMBER(4) | NOT NULL,  pk\_payments,  fk\_p\_bookings |  |  |
| \*cus\_id | NUMBER(7) | NOT NULL,  pk\_payments,  fk\_p\_customers |  |  |
| bill\_number | NUMBER(8) | UNIQUE |  | seq\_payments |
| payment\_mode | VARCHAR2(10) | UPPER |  |  |
| total\_amount | NUMBER(7,2) |  |  |  |
| discount\_amount | NUMBER(7,2) |  |  |  |
| final\_amount | NUMBER(7,2) |  |  |  |
| paid\_date | DATE |  |  |  |

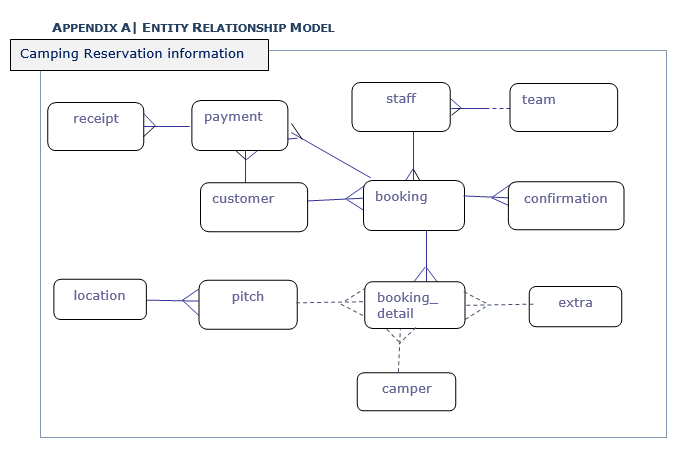
**RECEIPTS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ATTRIBUTE | DATATYPE | CONSTRAINT | DEFAULT | SEQUENCE |
| receipt\_number | NUMBER(8) | pk\_receipts |  | seq\_receipts |
| receipt\_date | DATE |  | SYSDATE |  |
| \*booking\_id | NUMBER(4) | NOT NULL,  fk\_p\_bookings |  |  |
| \*cus\_id | NUMBER(7) | NOT NULL,  fk\_p\_customers |  |  |

**BOOKING\_DETAILS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ATTRIBUTE | DATATYPE | CONSTRAINT | DEFAULT | SEQUENCE |
| \*booking\_id | NUMBER(4) | NOT NULL, pk\_booking\_details  fk\_bd\_bookings |  |  |
| \*camper\_id | NUMBER(4) | pk\_booking\_details  fk\_bd\_campers |  |  |
| \*pitch\_id | NUMBER(8) | pk\_booking\_details  fk\_bd\_pitches |  |  |
| \*extra\_id | NUMBER(4) | pk\_booking\_details  fk\_bd\_extras |  |  |

1. **Entity Relationship Model**



|  |  |
| --- | --- |
| Entity | Description |
|  |  |
| team | Description of the staff groups eg sales, admin, account |
| staff | Staff details |
| customer | Details of the person booking the camping trip |
| confirmation | Confirmation details of the trip elements |
| booking | Completed order form for the camping trip |
| payment | Details of payment, type, amount, date |
| receipt | Receipt details for payments |
| booking detail | Details for the camping trip |
| location | Details of the different locations, such as address |
| pitch | Pitch type eg tent, campervan, grass, electric hookup, water |
| extra | Details fo extras such as fire pits, logs, canoe hire, welcome pack |
| camper | Description of member of the group camping group eg children, dogs |