Q 1 M/s Alpha Ltd. maintains database of its employees the details of two tables of which is given below:

Employees

Description
Identity of Employee
Name of Employee
Date of Birth

PayDetails

Description
Identity of Employee
Basic Pay for Month
Numeric value of month

Required:

- Create a database named as Payroll that contains above tables with referential integrity constraints.
- Ensure that the date of birth of employee is not after 1-Apr-1986. Give a suitable message if this condition/constraint is violated.
- Enter three records of employees with their pay details for two different months.
- Create and execute a query that retrieves Identification of Employee, their names, the date of birth and the basic pay for the month of April.

Q 2 A clinic operates a laboratory that conducts various types of pathological tests on patients visiting the clinic. The database consists of two tables that have been described below:

Patients

Description
Identification of Patient
First Name of Patient
Middle Name of Patient
Last Name of Patient
Date of Birth

Tests

Description
Identification of Patient
Identity of Test
Date of Test
Test charges

Required:

- Create database for a clinic that contains above tables with referential integrity constraints.

- Enter 2 records of the patients and 6 records of tests
- Incorporate a constraint to specify that the laboratory not charge more than Rs.100 for any test that conducted in laboratory
- Write and Execute QUERY that retrieves date of test, Identity of test and the charges paid by a particular patient

Q 3 The Accounts of M/s Alpha Ltd. are classified within accounting groups such as Expenses, Incomes, Assets and Liabilities. The company maintains database of its accounts, the extract of which is given below: You are provided with the following database tables

AccountType

Description
Identity of Accounting Group (Primary Key)
Name of Accounting Group

Accounts

Description
Identity of Account (Primary Key)
Name of Account
Identity of Accounting Group

Required:

- Create a database that contains above tables with referential integrity constraints.
- Enter records of three accounting groups and 6 accounts, each of which belongs to one of these.
- While entering the data in accounts table, it must be ensured that the identity of accounting group is interactively retrieved from AccountType as a list.
- Prepare a Form that is used for entering the details of accounts in Accounts table.

Q 4 M/s Alpha Ltd. maintains database of its employees the details of two tables of which is given below:

Accounts

Description
Identity of Account (Primary Key)
Name of Account

Vouchers

Description
Identity of Voucher (Primary Key)
Dated
Account Debited
Account Credited
Amount

Required:

- Create a database named as Accounts that contains above tables with referential integrity constraints.
- Ensure that the date of transaction falls within the financial year 2004-05. Give a suitable message if this condition/constraint is violated.
- Enter six records for Accounts and four records of vouchers for simple accounting transactions.
- Design a form that is capable of entering transactions into vouchers table.

Q5. A health center provides health services to outdoor patients visiting the clinic. The database consists of two tables that have been described below:

Patients

Description
Identification of Patient (Primary Key)
First Name of Patient
Middle Name of Patient
Last Name of Patient
Date of Birth

Consultation

Description
Identification of Patient (Primary Key)
Date of Consultation
Fee Received
Diagnosis

Required:

- Create database for the health center, consisting of above two tables with referential integrity constraints.
- Enter 2 records of patients and 4 records of consultation.
- Incorporate a constraint to specify that the consultation fee is not below Rs.200 per patient per day.
- Write and Execute a query that retrieves date of consultation and the consultation fee paid by a particular patient

Q6. M/s Alpha Ltd. maintains database of its employees the details of two tables of which is given below:

Accounts

Description
Identity of Account
Name of Account

Vouchers

Description
Identity of Voucher
Account Debited

Account Credited
Dated
Amount
Narration

Required:

- Create a database named as Accounts that contains above tables with referential integrity constraints.
- Ensure that the date of transaction falls within the financial year 2004-05. Give a suitable message if this condition/constraint is violated.
- Enter six records for Accounts and four records of vouchers for simple accounting transactions.
- Create and execute a query that retrieves a set of accounts that have been debited with their dates, their name and amount of the transaction.

Q7. M/s Gamma study center is engaged in conducting coaching classes for various courses. There are a number of students pursuing different courses at this coaching center. A database is maintained to store various data items using the following two tables:

Students

Description
Identity of Student
Name of Students
Identity of Course

Courses

Description
Identity of Course
Name of Course
Course fees

Required:

- Create a database that contains above tables with referential integrity constraints established.
- Enter records of two courses and three students, each of whom belongs to one of these courses
- While entering the data in course table, it must be ensured that the course fee does not exceed Rs.10000.
- Prepare a Form that is used for entering the data pertaining to students in appropriate table.

Q8. A clinic operates a laboratory that conducts various types of pathological tests on patients visiting the clinic. The database consists of two tables that have been described below:

Patients

Description
Identification of Patient
First Name of Patient
Middle Name of Patient
Last Name of Patient
Date of Birth

Tests

Description
Identification of Patient
Identity of Test
Name of Test
Test Charges
Date of Test
Result of Test as comments

Required:

- Create database for a clinic that has a pathological laboratory.
- Enter two records of patients and six records of tests.
- Establish and implement referential integrity between fields of tables.
- Incorporate a constraint to specify that the laboratory not charge than Rs.100 for any test that conducted in laboratory
- Write and execute a query that retrieves date of test, name of test and the charges paid by a particular patient

Q9. M/s Moonshine Ltd. maintains a database of its ***inventory*** consisting of *five* different types of items through two tables, details of which are given below:

Inventory Items

Description
Identity of Item
Name of Item
Rate of Sales Tax
Opening Stock (in units)

Transactions

Description
Invoice Number
Type of Transaction (**P**=Purchase, **S**=Sales)
Date of Transaction
Identity of Item
Quantity (in units)

Required:

- Create a database for the financial year 2006-07 that contains above tables with referential integrity constraints.
- Ensure that the date of transaction falls within the financial year 2006-07. Give a suitable message if this condition/constraint is violated.
- Enter five records for **Inventory Items** and four records of **Transactions**.
- Design a form that is capable of entering transactions into **Transactions** table.

Q10. M/s HLK Ltd. stores the data as to the leave taken by its employees in the database consisting of two tables with following:

Employee

Description
Identity of Employee
Name of Employee
Date of Joining the Firm

Leave Record

Description
Identity of Employee
Date of Leave
Type of Leave: (1=Casual,2=Earned, 3=Medical)
Number of Days

Required:

- Create a database named as that contains above tables with referential integrity constraints.
- Ensure that the date of joining the firm for an employee is not after 1-Apr-1986. Give a suitable message if this condition/constraint is violated.
- Enter six records for **leave**, three records of **employees** for the three different

type of leave.

- Create and execute a query that prepares a list of employees with their names, the days of leave and the expected date of joining after expiry of leave.

Q11. M/s Alpha Ltd. maintains database of its employees. The details of two tables given below:

Employees

Description
Identity of Employee
Name of Employee
Date of Birth
Department Identification

Departments

Description
Identity of Department
Name of Department

Required:

- Create a database that contains above tables with referential integrity constraints established
- Ensure that the date of birth of employee is not after 1-Apr-1986. Give a suitable message if this condition/constraint is violated.
- Enter four records for departments, six records of employees with their departments specified.
- Create and execute a query that retrieves Identification of Employee, their names, the date of birth and the department that he belongs to.

Q12.A clinic operates a laboratory that conducts various types of pathological tests on patients visiting the clinic. The database consists of two tables that have been described below:

Patients

Description
Identification of Patient
First Name of Patient
Middle Name of Patient
Last Name of Patient
Date of Birth

TestResult

Description
Identification of Patient
Identity of Test
Name of Test
Date of Test

Result of Test as comments
Test Charges

Required:

- Create database for a clinic that has a pathological laboratory.
- Establish and implement referential integrity between fields of tables.
- Enter 2 records of patients and 6 records of test results.
- Incorporate a constraint to specify that laboratory does not charge more than Rs.250 for any test that conducted in the laboratory
- Generate a Form that is capable of entering data of patients test results in Test Results table

Q13. The Accounts of M/s Alpha Ltd. are classified within accounting groups such as Expenses, Incomes, Assets and Liabilities. The company maintains database of its accounts, the extract of which is given below: You are provided with the following database tables

AccountType

Description
Identity of Accounting Group
Name of Accounting Group

Accounts

Description
Identity of Account
Name of Account
Identity of Accounting Group
Balance in account

Required:

- Create a database that contains above tables with referential integrity constraints.
- Enter records of three accounting groups and 6 accounts, each of which belongs to one of these.
- While entering the data in accounts table, it must be ensured that the identity of accounting group is interactively retrieved from AccountType as a list of items.
- Write and execute a query that is capable of retrieving a set of accounts, which belong to a particular group or type of accounts.

M/s Alpha Ltd. maintains database of its employees the details of two tables is given below:

Accounts

Description
Identity of Account
Name of Account

Vouchers

Description
Identity of Voucher
Account Debited
Account Credited
Date of transaction
Amount
Narration

Required:

- Create a database named as **Accounts** that contains above tables with referential integrity constraints.
- Ensure that the amount of transaction is above Rs.100 as a transaction below this limit is considered to petty and dealt with separately. Give a suitable message if this condition/constraint is violated.
- Enter six records for Accounts and four records of vouchers for simple accounting transactions.
- Create and execute query that retrieves a set of account that have been debited with their date, name and amount of transaction.

14 The library at ABC college maintains ***database*** of the books issued and returned by the students, consisting of two tables, details given below:

Students

Description
Identity of Student
Name of Student
Date of Birth

Books

Description
Accession Number
Title of Book

BooksIssued

Description
Identity of Student
Accession Number
Date of Issue
Date of Return

Required:

- Create a database that contains above tables with referential integrity constraints defined.
- Ensure that the date of birth of student is not after 1-Apr-1990. Give a suitable message if this condition/constraint is violated.
- Enter four records for students, six records of books and two records of books issued.

- Design and generate a form that may be used for entering the books issued to students interactively.