Task 2

1. Creation and selecting database as an active one:

CREATE DATABASE LIBRARY;

USE LIBRARY;

1. Creation of the MEMBERS table:

CREATE TABLE MEMBERS (

CardNo char(5) PRIMARY KEY,

Surname varchar(15) not null,

Name varchar(15) not null,

Address varchar(150),

Birthday\_date date not null,

Gender char,

Phone\_No varchar(15),

CONSTRAINT CK\_Gender CHECK ([Gender] IN ('M', 'F')),

CONSTRAINT CardNo\_length CHECK ( LEN([CardNo]) = 5 )

);

1. Creation of the Employees table and adding the Gender field:

CREATE TABLE Employees (

emp\_id integer PRIMARY KEY IDENTITY(1,1),

Surname varchar(15) NOT NULL,

Name varchar(15) NOT NULL,

Birthday\_date date NOT NULL,

Emp\_date date,

Gender char,

CONSTRAINT CK\_Emp\_date CHECK (Emp\_date > Birthday\_date),

CONSTRAINT CK\_Gender\_Employees CHECK ([Gender] IN ('M', 'F'))

);

1. Creation of the Publishers table:

CREATE TABLE Publishers (

pub\_id integer PRIMARY KEY IDENTITY(1,1),

Name varchar(50) NOT NULL,

City varchar(50) NOT NULL,

Phone\_No varchar(15)

);

1. Creation of the Books table:

CREATE TABLE Books (

BookID char(5) PRIMARY KEY,

Pub\_ID integer FOREIGN KEY REFERENCES Publishers(pub\_id),

Type varchar,

Price money NOT NULL,

Title varchar(40) NOT NULL,

CONSTRAINT BookID\_length CHECK ( LEN([BookID]) = 5 ),

CONSTRAINT CK\_Type CHECK (Type IN ('novel', 'historical', 'for kids', 'poems', 'crime story', 'science fiction', 'science'))

);

1. Creation of the BOOK\_LOANS table and adding constraint forcing the uniqueness of the pair values:

CREATE TABLE BOOK\_LOANS (

LoanID integer PRIMARY KEY IDENTITY(1,1),

CardNo char(5) FOREIGN KEY REFERENCES MEMBERS(CardNo),

BookID char(5) FOREIGN KEY REFERENCES Books(BookID),

emp\_id integer FOREIGN KEY REFERENCES Employees(emp\_id),

DateOut date,

DueDate date,

Penalty money CHECK (Penalty >= 0) DEFAULT 0,

CONSTRAINT CK\_date CHECK (DueDate > DateOut),

);