Activity# 1

1. Designing database:

```
CREATE TABLE library_books (
        book_id INT PRIMARY KEY,
        title VARCHAR(100) NOT NULL,
        author VARCHAR(50),
        published_year YEAR,
        genre VARCHAR(30),
        copies_available INT
);

INSERT INTO library_books VALUES
(101, “SQL Fundamentals”, “John Doe”, 2022, “Technology”, 5);

UPDATE library_books
SET copies_available = 7
WHERE book_id = 101;

DELETE FROM library_books WHERE published_year < 2000;
```

2. Identify the most appropriate SQL command

1. CREATE – this command is used to create a table
2. ALTER – this command is used to update default values within a table
3. DELETE – this command is used to delete records from a table
4. GRANT – this command is used to provide permissions to users
5. DROP – this command is used to delete tables

Activity# 2

1. course_t TABLE

```
CREATE TABLE course_t (
        course_id INT PRIMARY KEY NOT NULL,
        course_name VARCHAR(50) NOT NULL,
        credits INT NOT NULL
);

ALTER TABLE course_t
ADD COLUMN enrollment_limit INT;
```

```
INSERT INTO course_t (course_id, course_name, credits)
VALUES (101, “Introduction to Databases”, 3);

UPDATE course_t
SET credits = 4
WHERE course_id = 101;

CREATE USER ‘ex_user’@’localhost’
IDENTIFIED BY ‘password’;

REVOKE SELECT ON course_t FROM ‘example’@’localhost’;
```

2. student_t TABLE

```
CREATE TABLE student_t (
        stud_id INT PRIMARY KEY NOT NULL,
        stud_name VARCHAR(50) NOT NULL,
        stud_sec VARCHAR(30) NOT NULL,
        stud_prog VARCHAR(20),
        stud_yr VARCHAR(5)
);

ALTER TABLE student_t
ADD COLUMN email VARCHAR(100);

INSERT INTO student_t (stud_id, stud_name, stud_sec, stud_prog, stud_yr)
VALUES (101, “Alice”, “CS”, “1”);

SELECT * FROM student_t
WHERE stud_sec = “A”;

DELETE FROM student_t;

CREATE TABLE grades_t (
        grade_id INTEGER PRIMARY KEY,
        stud_id INTEGER,
        FOREIGN KEY (stud_id) REFERENCES student_t(stud_id)
);

UPDATE student_t
SET stud_yr = “2”
WHERE stud_id = 101;
```