Lab 1

Exercise 1

Toys - toy_id, name, price
Attributes - attribute_id, name, value
Toy_attribute - toy_id, attribute_id

This design allows the toy attributes to be more flexible in terms of adding new attributes on existing toys. This also makes it easier to maintain and considerably improves performance as it avoids redundant data on the attributes.

Exercise 2


```
CREATE TABLE E1(
        K1 number not null,
        CONSTRAINT E1_pk PRIMARY KEY (K1)
);

CREATE TABLE E2(
        K2 number not null,
        K1 number,
        CONSTRAINT E2_pk PRIMARY KEY (K2),
        CONSTRAINT fk_E1 FOREIGN KEY (K1) REFERENCES E1 (K1)
);
```


```
CREATE TABLE E1(
        K1 number not null,
        CONSTRAINT E1_pk PRIMARY KEY (K1)
);

CREATE TABLE E2(
        K2 number not null,
        K1 number,
        CONSTRAINT E2_pk PRIMARY KEY (K2),
        CONSTRAINT fk_E1 FOREIGN KEY (K1) REFERENCES E1 (K1)
);
```


```
CREATE TABLE E1(
        K1 number not null,
        CONSTRAINT E1_pk PRIMARY KEY (K1)
);

CREATE TABLE E2(
        K2 number not null,
        K1 number not null,
        CONSTRAINT E2_pk PRIMARY KEY (K2),
        CONSTRAINT fk_E1 FOREIGN KEY (K1) REFERENCES E1 (K1)
);
```

Exercise 3

Cinema - cinema_id, name, location, contact_no
Screen - screen_id, cinema_id FK
Seat - seat_id, screen_id FK
Movie - movie_id, title, duration, rating
Schedule - schedule_id, date, screen_id FK, time, movie_id FK
Customer - username, password, DOB
Ticket - ticket_type, price
Booking - booking_id, username FK, schedule_id FK, seat_id FK, screen_id FK, cinema_id FK, ticket_type FK