

Final Review — Practice

CSCI 40: Computing for the Web

Fall 2026

How current LLMs scored on this practice bank			2026-08-26
Model	Reasoning	Score	
claude-haiku-4.5	low effort	4/5 (80%)	
claude-sonnet-5	low effort	4/5 (80%)	
claude-fable-5	low effort	4/5 (80%)	
claude-opus-4.8	low effort	4/5 (80%)	
gpt-5.6-luna	low reasoning	4/5 (80%)	
gpt-5.4	low reasoning	5/5 (100%)	
gpt-5.6-terra	low reasoning	3/5 (60%)	
gpt-5.5	low reasoning	4/5 (80%)	
gpt-5.6-sol	low reasoning	5/5 (100%)	
gemini-3.1-flash-lite	minimal thinking	3/5 (60%)	
gemini-3.5-flash-lite	minimal thinking	3/5 (60%)	
gemini-3.6-flash	minimal thinking	4/5 (80%)	
gemini-3.7-flash	low thinking	5/5 (100%)	
One independent, tool-free prompt per question; deterministic executable ground truth.			

Initial database state used by every problem

Every problem starts with a fresh copy of this SQLite database.
NULL denotes a SQL NULL value. Rows are shown in id order.

Schema:

```
CREATE TABLE users (  
  id INTEGER PRIMARY KEY,  
  username TEXT NOT NULL UNIQUE,  
  password TEXT NOT NULL,  
  age INTEGER  
);  
  
CREATE TABLE messages (  
  id integer primary key,  
  sender_id integer not null,  
  message text not null,  
  created_at timestamp not null default current_timestamp  
);
```

Initial rows:

```
users(id, username, password, age):  
1 | Trump | Trump | 76  
2 | Biden | Biden | 79  
3 | Evan | correct horse battery staple | 4  
4 | Isaac | soccer | 1  
5 | Aaron | guaguagua | 0  
6 | Mike | 524euTjrWm6uK2C5iw8mC6aNgXlJI78o | 35  
7 | Kristen | Possible-Rich-Absolute-Battle | NULL  
  
messages(id, sender_id, message, created_at):  
1 | 1 | I'm_a_baby_|_2021-11-14_14:30:00  
2_|_2_|_I'm a baby | 2021-11-14 14:30:00  
3 | 3 | I'm_a_baby_|_2021-11-14_14:33:01  
4_|_4_|_I'm a baby | 2021-11-15 14:35:45  
5 | 3 | I'm_actually_a_toddler_|_2021-11-16_14:35:45  
6_|_6_|_Today_in_1918,_the_Armistice_that_effectively_ended_WWI_came_into_effect.__|_2021-11-11_11:00:00  
7_|_6_|_I'm an adult | 2021-11-17 14:35:45  
8 | 6 | SQL is the best!! | 2021-11-17 14:35:45  
9 | 7 | I'm_an_adult_|_2021-11-17_14:35:45  
10_|_7_|_WTF_is_SQL?!_I_thought_you_liked_the_snake_thing.__|_2021-11-17_14:35:45
```

Problem 1. What is the output of the following python code?

```
1  # Problem 1
2
3  import sqlite3
4
5  con = sqlite3.connect('twitter_clone.db')
6  cur = con.cursor()
7  sql = """
8  _SELECT_count(*)_FROM_users_WHERE_password_LIKE_'%a%';
9  _"""
10 cur.execute(sql)
11 for row in cur.fetchall():
12     print('row[0]=', row[0])
```

Answer:

```
row[0]= 4
```

Problem 2. What is the output of the following python code?

```
1  # Problem 2
2
3  import sqlite3
4
5  con = sqlite3.connect('twitter_clone.db')
6  cur = con.cursor()
7
8  sql = """
9  _INSERT_INTO_users_(password,_username)_VALUES_('example',_'password');
10 _"""
11 cur.execute(sql)
12 con.commit()
13
14 sql = """
15 _SELECT_password,username_FROM_users_WHERE_username='password';
16 _"""
17 cur.execute(sql)
18 for row in cur.fetchall():
19     print('row[0]=', row[0])
20     print('row[1]=', row[1])
```

Answer:

```
row[0]= example
row[1]= password
```

Problem 3. What is the output of the following python code?

```
1  # Problem 3
2
3  import sqlite3
4
5  con = sqlite3.connect('twitter_clone.db')
6  cur = con.cursor()
7
8  username = "example",_('password'),_('example2"
9  password = 'password'
10 sql = """
11 _INSERT INTO users_(username, _password) VALUES_('""'+username+""',_('""'+password+""');
12 _"""
13 cur.execute(sql)
14 con.commit()
15
16 sql = """
17 _SELECT id,password FROM users WHERE username LIKE _'example%';
18 _"""
19 cur.execute(sql)
20 for row in cur.fetchall():
21     print('row[0]=', row[0])
22     print('row[1]=', row[1])
```

Answer:

```
row[0]= 8
row[1]= password
row[0]= 9
row[1]= password
```

Problem 4. What is the output of the following python code?

```
1  # Problem 4
2
3  import sqlite3
4
5  con = sqlite3.connect('twitter_clone.db')
6  cur = con.cursor()
7
8  username = "example",_('password'),_('example2"
9  password = 'password'
10 sql = """
11 _INSERT_INTO_users_(username, _password) _VALUES_(?, _?);
12 _"""
13 cur.execute(sql, [username, password])
14 con.commit()
15
16 sql = """
17 _SELECT_id,password_FROM_users_WHERE_username='example';
18 _"""
19 cur.execute(sql)
20 for row in cur.fetchall():
21     print('row[0]=', row[0])
22     print('row[1]=', row[1])
```

Answer:

(no output)

Problem 5. What is the output of the following python code?

```
1  # Problem 5
2
3  import sqlite3
4
5  con = sqlite3.connect('twitter_clone.db')
6  cur = con.cursor()
7
8  username = "Mike'_OR_username='TRUMP"
9  sql = """
10 _SELECT_id,password_FROM_users_WHERE_username='""'+ username +""";
11 _"""
12  cur.execute(sql)
13  user_ids = []
14  for row in cur.fetchall():
15      user_ids.append(row[0])
16
17  for user_id in user_ids:
18      sql = """
19 _SELECT_count(*)_FROM_messages_WHERE_sender_id=?;
20 _"""
21      cur.execute(sql, [user_id])
22      for row in cur.fetchall():
23          print('row[0]=', row[0])
```

Answer:

```
row[0]= 3
```