

**KOLEJ PROFESIONAL MARA BERANANG**

**DIPLOMA IN COMPUTER SCIENCE**

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| **COURSE NAME** | **:** | **WEBSITE APPLICATION DEVELOPMENT** |
| **COURSE CODE** | **:** | **CSC2173** |
| **ACADEMIC SESSION** | **:** | **SESSION 2 2023/2024** |
| **TYPE OF ASSESSMENT** | **:** | **PRACTICAL TEST 1** |
| **DURATION** | **:** | **1.5 HOURS** |

**CLO 2: BUILD DYNAMIC WEBSITE BASED ON WEB FRAMEWORK.**

**INSTRUCTION TO CANDIDATES:**

1. Time allowed is **1.5 HOURS.**
2. Execute all tasks.
3. Submit Django project folder (compressed/zip) and a document containing the screenshots.

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| **Section / Question No.** | **Marks** |
| **Part A** | **/3** |
| **Part B** | **/10** |
| **Part C** | **/5** |
| **Part D** | **/17** |
| **Total** | **/35** |

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| --- | --- |
| **Personal Details** | |
| **Name** |  |
| **I/D Number** | **BCS** |
| **Class** | **DCS 4 [A] [B] [C] [D]** |
| **Lecturer** | **PUAN NORAZIMAH**  **PUAN NURHANNANIE** |

### Overview

Tables shown below are part of Annual Dinner Allocation database.

Staff

|  |  |  |
| --- | --- | --- |
| staffid (PK) | staffname | staffposition |
| S001 | Azreen | HR Manager |
| S002 | Karim | CTO |
| S003 | Felicia | Technician |

Dinnertable

|  |  |  |
| --- | --- | --- |
| tablepax | tabletag | tableprice |
| 8 | VIP | 1000 |
| 8 | VIP | 800 |
| 10 | NORMAL | 800 |

Allocation

|  |  |  |  |
| --- | --- | --- | --- |
| Allocationid (PK) | tid(Dinnertable) (FK) | Staffid (FK) | paidstatus |
| A1 | (VIP1) | S001 | unpaid |
| A2 | (Normal) | S002 | paid |
| A3 | (VIP1) | S003 | paid |

### Software requirement: Visual Studio Code

### Language : Python



### Framework : Django

**Complete and provide screenshots for all tasks (Part A until Part D).**

**Part A: Create a Django project (Task 1-3)**

* + 1. Create a django project name ‘yourstudentid\_name’ for example: BCS2207001\_Ahmad.
    2. Create application named ‘dinner’.
    3. Set application into project.

**Part B: Define Models. (Task 4)**

* + 1. Create all models based on the tables provided in the overview above with appropriate:

1. Model name
2. Field type and validation
3. Relationship / Key field

**Part C: Create and apply migrations (Task 5-7)**

* + 1. Create initial migrations.
    2. Apply migrations.
    3. Show migrated fields Visual Studio Code application.

**Part D: Implement CRUD operation in database (Task 8-18)**

* + 1. Open Django management command; interactive console.
    2. Import models in interactive console.
    3. **Insert** all objects into database using command prompt.
    4. **Display** objects for all models using command prompt.
    5. **Display** all tables and its objects using dbSqlite tool viewer in Visual Studio Code.
    6. Terminate interactive console.
    7. Add a new **field Status** in Dinnertable and set default value to **‘Available’.** Provide screenshot of models.py file.
    8. **Update position** for Felicia to IT Technician.
    9. **Delete** object VIP2 in Dinnertable.
    10. **Display** only Felicia information from table Staff.
    11. Display all objects in all tables after executing all tasks until task 17.

### Assessment Rubrics:

| **No.** | **Task** | **Marks** | | **Mark Obtained** |
| --- | --- | --- | --- | --- |
| **Part A : Create a Django project** | | | | |
| 1 | Create a django project name ‘yourstudentid\_name’ for example: BCS2207001\_Ahmad. | * Successfully create Django project. | 1 |  |
| 2 | Create a subproject name dinner. | * Successfully create application. | 1 |  |
| 3 | Set application into project. | * Correct application is set into Django project. | 1 |  |
| Total (Part A) : | | | | / 3 |
| **Part B : Define Models** | | | | |
| 4 | Create all models based on the tables provided in the overview above with appropriate:   1. Model name | * Appropriate class name created. (Each class: 1m, Total: 3m) | 3 |  |
| 1. Field type and validation | * Appropriate data type and maximum length for appropriate field. (Each Class: 1m, Max: 3m) | 3 |  |
| 1. Relationship / Key field | * Correctly define key field. (Primary key and Foreign key, Total:4m) | 4 |  |
| Total (Part B) : | | | | / 10 |
| **Part C : Create and apply migrations** | | | | |
| 5 | Create initial migrations | * Apply command prompt to packaging up the models into individual migration files. (Each table: 1m, Max: 3m) | 3 |  |
| 6 | Apply migrations | * Apply command to execute all the tables of the installed apps are created in database file. | 1 |  |
| 7 | Show migrated fields Visual Studio Code application. | * Show tables’ structures including its fields and their data types using SQLite Explorer tool. | 1 |  |
| Total (Part B) : | | | | / 5 |
| **Part D: Implement CRUD operation in database (Task 8-18)** | | | | |
| 8 | Open Django management command; interactive console | * Able to activate interactive console. | 1 |  |
| 9 | Import models in interactive console. | * Able to import all models in interactive console. | 1 |  |
| 10 | **Insert** all objects into database using command prompt. | * Successfully insert objects into partial dependency tables using command prompt.   (Each table: 1m, Total: 2m) | 2 |  |
| * Successfully insert objects into fully functional dependency table using command prompt. | 2 |  |
| 11 | **Display** objects for all models using command prompt. | * Show inserted object in all tables using command prompt. (Each table: 0.5, Total:1.5m) | 1.5 |  |
| 12 | **Display** all tables and its objects using dbSqlite tool viewer in Visual Studio Code. | * Provide screenshots for all tables containing at least one object using Visual Studio Code (Each table: 0.5, Total:1.5m) | 1.5 |  |
| 13 | Terminate interactive console by using command prompt and provide screenshot. | * Provide screenshot of a successful terminating interactive console by using command prompt. | 1 |  |
| 14 | Add a new **field Status** in Dinnertable and set default value to **‘Available’.** Provide screenshot of models.py file**.** | * Provide screenshot of codings in models.py | 1 |  |
| * Provide screenshot showing updated field and its objects in table using Visual Studio Code. | 2 |  |
| 15 | **Update position** for Felicia to IT Technician. | * Provide screenshot of a successful command prompt to update object. | 1 |  |
| 16 | **Delete** object VIP2 in Dinnertable. | * Provide screenshot of a successful command prompt to delete object. | 1 |  |
| 17 | **Display** only only Felicia information from table Staff. | * Provide screenshot of a successful command prompt to display specific object. | 1 |  |
| 18 | Display all objects in all tables after executing all tasks until task 17. | * Provide correct screenshots for all tables and its objects after executing all tasks until task 17. | 1 |  |
| Total (Part D) : | | | | / 17 |
| **Total Marks Earned** | | | | / 35 |
| **Total Percentage (20%)** | | | | / 20 |