

COMP 248

Assignment 4 Completeness & Functionality

A welcome message is printed at the top to greet the user and then using a switch statement a list of menu option is displayed to ask user for its input.

```
Welcome to Simple Mobile Dental Clinic Management System (SMDCMS)
+++++
Menu Options:
1001: Define Office/Clinic
1002: Add Dentist to Office/Clinic
1003: Add Dental Assistants to Office/Clinic
1004: Register Patient(s) to Office/Clinic
1005: Deregister Dental Assistant(s) and/or Patient(s)
1006: Enter/Update Patient(s) Charges
1007: Display Patients' Statistics
1008: Display Office/Clinic Statistics
1009: Display Chargesheet
1010: Exit

Enter a menu code: 1001
```

1001: Define Office/Clinic:

- This segment handles the process of defining an office/clinic within the system.
- It prompts the user to input information about the office/clinic, including its name (ClinicName), code (ClinicCode), and term/permit status (Term/Permit).
- After receiving the input, it validates whether at least three pieces of information are provided.
- If the input is valid, it sets the clinic information in the Clinic object, which manages clinic-related operations.
- Upon successful definition, it displays a success message. If the input is insufficient, it notifies the user with an error message.

```
Enter a menu code: 1001
...Define Office/Clinic...
.....
Enter Office/Clinic information (ClinicName ClinicCode Term/Permit) as a single-line entry:
CONCORDIA-UNIVERSITY-ER-BLDG (DENT-20) CON21-28
Office/Clinic defined successfully.
```

1002: Add Dentist to Office/Clinic

- This segment deals with the addition of a dentist to the office/clinic.
- It prompts the user to input information about the dentist, including their employee ID (EmployeeID), first name (FirstName), and last name (LastName).
- Similar to the define clinic segment, it validates whether at least three pieces of information are provided.
- If the input is valid, it creates a new Individual object representing the dentist and sets it in the Clinic object.

- Upon successful addition, it displays a success message. If the input is insufficient, it notifies the user with an error message.

```
Enter a menu code: 1002
...Add Dentist for Office/Clinic...
.....
Enter dentist's information (EmployeeID FirstName LastName) as a single-line entry:
40248132 owl Sun
Dentist added successfully.
```

1003: Add Dental Assistants to Office/Clinic

- This segment handles the addition of dental assistants to the office/clinic.
- It prompts the user to input information about one or more dental assistants in a specific format: (ID1,FirstName1,LastName1;ID2,FirstName2,LastName2;).
- The input is split into individual assistant details and validated for correct formatting.
- For each assistant, it checks if they already exist in the clinic. If not, it adds them.
- Upon completion, it displays status messages indicating successful addition or existing assistants, as well as any encountered formatting errors.

```
Enter a menu code: 1003
...Add Dental Assistant(s) (Hygienists/Clerks) to Office/Clinic...
.....
Enter Dental Assistant(s) information (ID1,FirstName1,LastName1;ID2,FirstName2,LastName2;):
226959739,Eagle,Fox;226959739,Eagle,Fox;685973229,Tit,Step;7322659889,Jay,Smart;325972689,Oriole,Top
Successfully Added: FOX, Eagle (226959739).
Already Exists: Fox, Eagle(226959739).
Successfully Added: STEP, Tit (685973229).
Successfully Added: SMART, Jay (7322659889).
Successfully Added: TOP, Oriole (325972689).
```

```
Enter a menu code: 1003
...Add Dental Assistant(s) (Hygienists/Clerks) to Office/Clinic...
.....
Enter Dental Assistant(s) information (ID1,FirstName1,LastName1;ID2,FirstName2,LastName2;):
123456,DuoLingo,test;7890123,IELTS,Test
Successfully Added: TEST, DuoLingo (123456).
Successfully Added: TEST, IELTS (7890123).
```

1004: Register Patient(s) to Office/Clinic

- This segment manages the registration of patients with the office/clinic.
- It prompts the user to input information about one or more patients in a specific format: (ID1,FirstName1,LastName1;ID2,FirstName2,LastName2).
- Similar to adding dental assistants, the input is split into individual patient details and validated.
- For each patient, it checks if they already exist in the clinic. If not, it adds them.
- Status messages are displayed to indicate successful addition, existing patients, or encountered formatting errors.

```
Enter a menu code: 1004
...Register Patient(s) at Office/Clinic...
-----
Enter patient information (ID1,FirstName1,LastName1;ID2,FirstName2,LastName2):
4011447800, Samuel, Oak; 7840114400, Red, Brock; 4020360400, Green, Misty; 4025818900, White, Jessies; 4022639500, Black, Johto
Successfully Added: OAK, Samuel (4011447800).
Successfully Added: BROCK, Red (7840114400).
Successfully Added: MISTY, Green (4020360400).
Successfully Added: JESSIES, White (4025818900).
Successfully Added: JOHTO, Black (4022639500).
```

```
Enter a menu code: 1004
...Register Patient(s) at Office/Clinic...
-----
Enter patient information (ID1,FirstName1,LastName1;ID2,FirstName2,LastName2):
4020360400, Green, Misty
Patient with id: 4020360400 already exists
```

```
Enter a menu code: 1004
...Register Patient(s) at Office/Clinic...
-----
Enter patient information (ID1,FirstName1,LastName1;ID2,FirstName2,LastName2):
40224303, Narendra, Mishra; 402243003, Mysel, ontop
Successfully Added: MISHRA, Narendra (40224303).
Successfully Added: ONTOP, Mysel (402243003).
```

1005: Deregister Dental Assistant(s) and/or Patient(s)

- This segment has two parts, corresponding to deregistering dental assistants (1003) and patients (1004).
- The user first selects which entity (assistants or patients) they want to deregister.
- Then, they input the IDs of the entities they want to deregister.
- The input is validated, and deregistration is performed accordingly.
- Status messages indicate successful deregistration, non-existing entries, or invalid menu options.

```
Enter a menu code: 1005
...Deregister Dental Assistant (s) and/or Patient (s)...
.....
Enter '1003' to deregister Dental Assistant(s) and '1004' to deregister patient(s):
1003
Enter information of entities (ID1;ID2):
226959739
Successfully Deleted: FOX, Eagle (226959739).

Enter a menu code: 1005
...Deregister Dental Assistant (s) and/or Patient (s)...
.....
Enter '1003' to deregister Dental Assistant(s) and '1004' to deregister patient(s):
1004
Enter information of entities (ID1;ID2):
4011447800;7840114400
Successfully Deleted: OAK, Samuel (4011447800).
Successfully Deleted: BROCK, Red (7840114400).
```

1006: Enter/Update Patient(s) Charges

- This segment handles the process of entering or updating charges for patients.
- The user inputs charges for one or more patients in the format (ID1,Charge1;ID2,Charge2).
- The input is split into individual patient charge details and validated.
- For each patient, their charge is updated.
- The segment utilizes the insertion sort algorithm to sort patients based on their charges in ascending order.
- Status messages indicate successful charge updates or non-existing patients, as well as any encountered formatting errors.

```
Enter a menu code: 1006
...Enter/Update Patient(s) Charges...
.....
Enter Patients' Charges (ID1,Charge1;ID2,Charge2):
4011447800,0.12;4025818900,12;7840114400,2.36;4022639500,2.37;40224303,0.1
Patient with id: 4011447800 is not present
Patient with id: 4025818900 updated with charges :12.0
Patient with id: 7840114400 is not present
Patient with id: 4022639500 updated with charges :2.37
Patient with id: 40224303 updated with charges :0.1
```

1007: Display Patients' Statistics

- This segment displays clinic name, dentist's name, number of dental assistants, and registered patients.
- It iterates through the patient array and prints each patient's details.

```
Enter a menu code: 1007
...Display Patients' Statistics...
.....
CONCORDIA-UNIVERSITY-ER-BLDG CON21-28
Dr. SUN, owl 40248132
Dentist Assistant: 5
The Number of patient registered with the clinic: 5
.....
Displaying patient information:
1: MISTY, Green (4020360400)
2: JESSIES, White (4025818900)
3: JOHTO, Black (4022639500)
4: MISHRA, Narendra (40224303)
5: ONTOP, Mysel (402243003)
```

1008: Display Office/Clinic Statistics

- This segment displays clinic information including name, code, and term/permit.
- It displays dentist information if available.
- It displays dental assistants' information if available.
- It displays the number of registered patients.

```
Enter a menu code: 1008
.....Office/Clinic Statistics.....
.....
Clinic name      : CONCORDIA-UNIVERSITY-ER-BLDG
Clinic Code      : (DENT-20)
Term/Permit       : CON21-28
Dentist Name     : Dr. SUN owl (40248132)
Dental Assistant 1: Step, Tit (685973229)
Dental Assistant 2: Smart, Jay (7322659889)
Dental Assistant 3: Top, Oriole (325972689)
Dental Assistant 4: test, Duolingo (123456)
Dental Assistant 5: Test, IELTS (7890123)
Registered patients : 5
```

1009: Display Chargesheet

- This segment displays the chargesheet header with column names.
- It copies the patient array to avoid modifying the original array.
- It sorts patients based on their charges in ascending order using the insertion sort algorithm.
- It displays patient details including entity ID, last name, first name, and charge.

```
Enter a menu code: 1009
.....Office/Clinic Chargesheet.....
P/N. Patient ID Surname Firstname Charge
-----
1 4020360400 MISTY Green 0.00
2 402243003 ONTOP Mysel 0.00
3 40224303 MISHRA Narendra 0.10
4 4022639500 JOHTO Black 2.37
5 4025818900 JESSIES White 12.00
-----
```

1010: Exit

- This segment handles the user's choice to exit the program.
- Upon selecting this option, a farewell message is displayed, acknowledging the user's decision to exit the Simple Mobile Dental Clinic Management System (SMDCMS).
- The message expresses gratitude to the user for their interaction with the system.
- Finally, the `System.exit(0)` statement is executed, terminating the program with a status code of 0, indicating successful completion.
- This ensures a graceful exit from the program, preventing further execution of code beyond this point.

```
Enter a menu code: 1010
Simple SMDCMS >>> Exiting...

Thank you for fostering our Simple Mobile Dental Clinic Management System (SMDCMS).

Process finished with exit code 0
```