



Assignment/Tutorial/Practical Report Cover Sheet

Assignment/Tutorial/Practical Number of Title :	Assignment
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Subject Code : TMF1434	Subject Name : Data Structure & Algorithms
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Name of Lecturer : Mdm Norazian Binti Mohamad Hamdan	
Due Date : 3 March 2020 (Friday) by 5.00pm	Date received and approved (for office use only)

Plagiarism and Collusion are methods of cheating that falls under Peraturan Akademik Universiti Malaysia Sarawak para 11: Etika Akademik

Plagiarism

Plagiarism is the presentation of work which has been copied in whole or in part from another person's work, or from any other source such as the internet, published books or periodicals without due acknowledgement given in the text.

Collusion

Collusion is the presentation of work that is the result in whole or in part of unauthorized collaboration with another person or persons.

Where there are reasonable grounds for believing that cheating has occurred, the only action that may be taken when plagiarism or collusion is detected is for the staff member not to mark the item of work and to report or refer the matter to the Dean. This may result in work being disallowed and given a fail grade or if the circumstances warrant, the matter may be referred to a Committee of inquiry for investigation. Such investigation may result in the matter being referred to the University Discipline Committee, **which** has the power to exclude a student.

Note: Assignments are returned after being assessed by lecturer and to be collected from the lecturer's office. Students should endeavour to collect their assignments prior to commencement of next semester. All unclaimed assignments become the property of the faculty and will become subject to destruction.

Student's Statement :

I certify that I have not plagiarized the work of others or participated in unauthorized collusion when preparing this assignment. I also certify that I have taken proper care in safeguarding my work and have made all reasonable efforts to ensure that my work not be able to be copied.

Signature : *mahmoud kassab*
Amos Daniel Lejau

MARK :	Comments:
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This cover sheet must be completed, signed and firmly attached to the front of the submission.

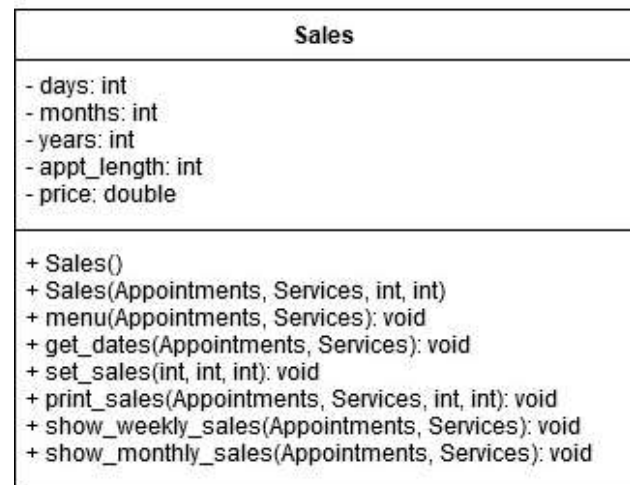
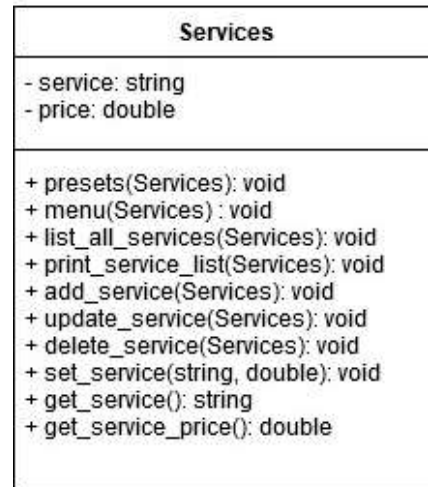
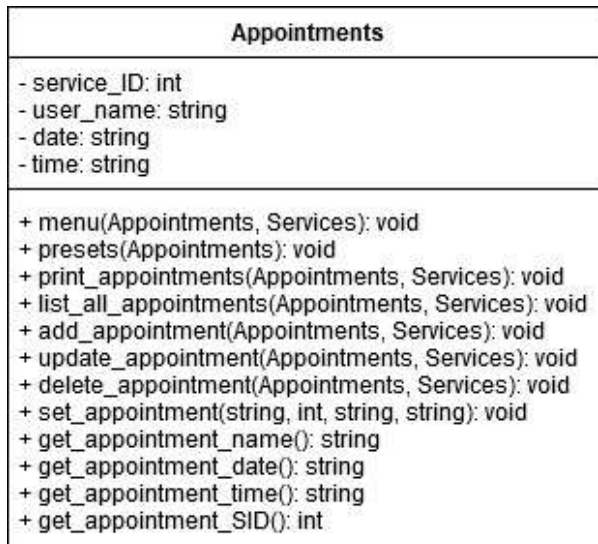
All work must be submitted by the due date. If an extension of work is granted, an assignment extension acknowledgement slip must be signed by the lecturer/tutor and attached to the assignment.

Please note that it is the student's responsibility to retain a copy of his/her own assignment.

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1. UML class diagram

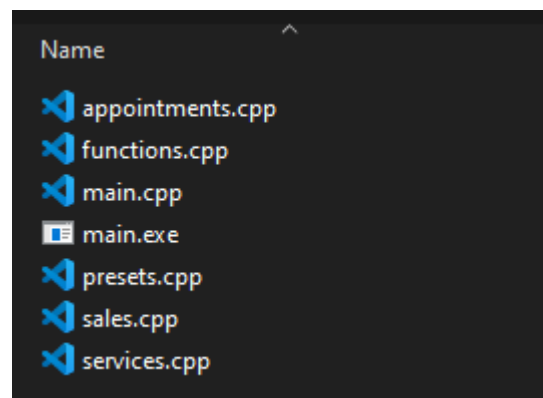
We have 3 classes in our system: Service, Appointments and Sales



In sales Class we use two constructors

We have 6 files.cpp

1. Appointment class file (appointment.cpp)
2. Services class file (services.cpp)
3. Sales class file (sales.cpp)
4. Presets file that have 5 presets data for each class
5. Functions file that contain general functions
6. Main file that contain the main method and the main menu



2

2. Screenshot of your program output

```

MINGW64; d/UNIMAS/19-20/TMF1434 DSA/Assignment/final/code
Mahmoud Kassab: code\ $ ./main
***Welcome to Borneo Hair Salon***
-----
>> /main/
-----
      1. Manage services
      2. Manage appointments
      3. Manage sales
      4. Exit
Choose option:
    
```

```

      4. Exit
Choose option: 1
=====
-----
>> /main/Manage services/
-----
      1. List all services
      2. Add a service
      3. Update a service
      4. Delete a service
      5. Main menu
      6. Exit
Choose option:
    
```

In the above image, we have a screenshot of the main menu, our main menu contains 4 options which are:
 1. Manage services 2. Manage appointments 3. Manage sales 4. Exit
 We also have error handler for wrong input

```

Choose option: 2
=====
-----
>> /main/Manage appointments/
-----
      1. List all appointments
      2. Add an appointment
      3. Update an appointment
      4. Delete an appointment
      5. Main menu
      6. Exit
Choose option:
    
```

```

=====
-----
>> /main/
-----
      1. Manage services
      2. Manage appointments
      3. Manage sales
      4. Exit
Choose option: kk

Please enter a valid number and try again!...
    
```

```

Choose option: 3
=====
-----
>> /main/Manage sales/
-----
      1. View weekly sales
      2. View monthly sales
      3. Main menu
      4. Exit
Choose option:
    
```

In Manage services and Manage appointments sub menus, we have menu for each one which contains 6 options: 1. List all services / appointments 2. Add a service / an appointment
 3. Update a service / an appointment 4. Delete a service / an appointment
 5. Main menu to go back to the main menu 6. Exit to exit from program

In Manage services sub menu

```
Choose option: 1
=====
All Services
-----
#  Name          Price
-----
1  hair-cutting   RM 10.5
2  hair-colouring RM 11
3  hairstyling    RM 20.5
4  Beard-styling  RM 15.5
5  Beared-cutting RM 10.5
```

1. View all services stored in the array
2. Add a new service by providing name and price, price must be a number
3. Update a service:
 - When update system will show all service so user can select which one he wants to update
 - User input service number, new name and new price
 - There is error check for price and service number
 - There is also error check if service number not found
4. Delete a service checks error for service number if not valid or not found

```
Select service #: 7
Service # not found, try again...
```

```
Select service #: k
Service number is not valid, try again...
```

```
=====
-----
>> /main/Manage services/
-----
1. List all services
2. Add a service
3. Update a service
4. Delete a service
5. Main menu
6. Exit
Choose option: 2
=====
Type service name: new service
Type service price (1.20): 22.2
```

```
Type service name: new name
Type service price (1.20): sssss

Price must be a number
-----
```

```
Choose option: 3
=====
All Services
-----
#  Name          Price
-----
1  hair-cutting   RM 10.5
2  hair-colouring RM 11
3  hairstyling    RM 20.5
4  Beard-styling  RM 15.5
5  Beared-cutting RM 10.5
6  new service    RM 22.2

Select service #: 5
Type a new service name: name edited
Type a new service price: 21.5

Update is successful
=====
```

In Manage appointments sub menu

We have List all appointments, add, update and delete

Main menu and exit

```
=====
-----
>> /main/Manage appointments/
-----
    1. List all appointments
    2. Add an appointment
    3. Update an appointment
    4. Delete an appointment
    5. Main menu
    6. Exit
Choose option:
```

List all appointments

Show user name,
service, date, time
and price

```
Choose option: 1
=====
All Appointments
-----
#  User Name      Service      Date      Time      Price
-----
1  Ali            hair-cutting  1/1/2020   11:00 AM  RM 10.5
2  Ahmed          hair-cutting  2/1/2020   08:00 AM  RM 10.5
3  John           hair-colouring 3/1/2020   01:00 PM  RM 11
4  Tom            hairstyling   10/1/2020  10:00 PM  RM 20.5
5  Sam            hairstyling   15/2/2020  09:00 PM  RM 20.5
=====
```

When adding a new appointment, system
shows the services to select one and enter
user name, date and time

We have error check for service number,
date and time format

```
=====
All Services
-----
#  Name      Price
-----
1  hair-cutting    RM 10.5
2  hair-colouring  RM 11
3  hairstyling    RM 20.5
4  Beard-styling  RM 15.5
5  Beared-cutting  RM 10.5

Choose service #: 5
Type user name: user
Type appointment date (DD/MM/YYYY): 11/11/2020
Type appointment time (HH:MM AM/PM): 11:11 AM

Adding is successful
=====
```

```
Choose service #: 5
Type user name: user
Type appointment date (DD/MM/YYYY): 11/11
date is not in a propper format (DD/MM/YYYY)...
=====
```

Update and delete an appointment
same as service

We also have error check if
appointment number not found for
update and delete

```
Choose service #: 5
Type user name: user
Type appointment date (DD/MM/YYYY): 11/11/2020
Type appointment time (HH:MM AM/PM): 11

Time is not in a propper format (HH:MM AM/PM)...
=====
```

```
Select appointment #: 7
Appointment # not found, try again...
=====
```


In Sales sun menu

We have 2 options view weekly sales

And view monthly sales

```
Choose option: 3
=====
>> /main/Manage sales/
=====
1. View weekly sales
2. View monthly sales
3. Main menu
4. Exit
Choose option: 1
=====
Type month eg.(1): 1
Type week number eg.(1): 1
=====
# User Name      Service      Date      Time      Price
-----
1 Alf            hair-cutting  1/1/2020   11:00 AM  RM 10.5
2 Ahmed          hair-cutting  2/1/2020   08:00 AM  RM 10.5
3 John           hair-colouring 3/1/2020   01:00 PM  RM 11
=====
Total Sales for this Week: 32
=====
```

We provide month and week to get the sales

And we have error check for month and week

```
=====
>> /main/Manage sales/
=====
1. View weekly sales
2. View monthly sales
3. Main menu
4. Exit
Choose option:
```

```
Type month eg.(1): k
Month number is not valid, try again...
```