

1) Start the program and don't load the scheduled appointments, enter invalid option, then exit)

```
Starting the Appointment Manager System
Weekly calendar created
Would you like to load previously scheduled appointments from a file (Y/N)? n

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 8

Invalid option

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 9

** Exit the system **
Would you like to save all scheduled appointments to a file (Y/N)? n
Good Bye!
```

2) Start the program and load the scheduled appointments from appointments1.csv, then 3 and enter invalid day)

```
Starting the Appointment Manager System
Weekly calendar created
Would you like to load previously scheduled appointments from a file (Y/N)? Y
Enter appointment filename: appointments.cs
File not found. Re-enter appointment filename: appointments1.csv
3 previously scheduled appointments have been loaded

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 3

** Print calendar for a specific day **
Enter day of week: toosday
Appointments for Toosday

Client Name      Phone      Day      Start      End      Type
-----
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: |
```

### 3) Option 3 – print a calendar for a valid day

```
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 3

** Print calendar for a specific day **
Enter day of week: saturday
Appointments for Saturday

Client Name      Phone      Day      Start      End      Type
-----
Tyler            587-123-4567 Saturday 09:00 - 10:00 Mens Colouring
Stephanie        368-999-1111 Saturday 10:00 - 11:00 Ladies Cut
                 Saturday 11:00 - 12:00 Available
                 Saturday 12:00 - 13:00 Available
                 Saturday 13:00 - 14:00 Available
                 Saturday 14:00 - 15:00 Available
                 Saturday 15:00 - 16:00 Available
                 Saturday 16:00 - 17:00 Available

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: |
```

### 4) Option 1 – schedule a new appointment

```
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 1

** Schedule an appointment **
What day: thursday
Enter start hour (24 hour clock): 11
Client Name: Steven
Client Phone: 403-600-6000
Appointment types
1: Mens Cut $40, 2: Ladies Cut $60, 3: Mens Colouring $40, 4: Ladies Colouring $80
Type of Appointment: 1
OK, Steven's appointment is scheduled!

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: |
```

5) Option 1 – schedule a new appointment in a booked spot

```
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 1

** Schedule an appointment **
What day: Thursday
Enter start hour (24 hour clock): 11
Sorry that time slot is booked already!

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: █
```

6) Option 1 – schedule a new appointment with invalid day as Sunday or invalid hour as 8 or 25

```
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 1

** Schedule an appointment **
What day: sunday
Enter start hour (24 hour clock): 11
Sorry that time slot is not in the weekly calendar!

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: █
```

```
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 1

** Schedule an appointment **
What day: Monday
Enter start hour (24 hour clock): 8
Sorry that time slot is not in the weekly calendar!

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: █
```

### 7) Option 2 – Find an appointment using an existing name

```
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 2

** Find appointment by name **
Enter Client Name: Steven
Appointments for Steven

Client Name      Phone      Day      Start      End      Type
-----
Steven           403-600-6000 Thursday 11:00 - 12:00 Mens Cut

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: |
```

### 8) Option 2 – Find an appointment using non-existing name

```
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 2

** Find appointment by name **
Enter Client Name: hamdy
Appointments for hamdy

Client Name      Phone      Day      Start      End      Type
-----
No appointments found.

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: |
```

### 9) Option 3 – print Thursday Calendar after adding Steven

```
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 3

** Print calendar for a specific day **
Enter day of week: Thursday
Appointments for Thursday

Client Name      Phone      Day      Start      End      Type
-----
                Thursday 09:00 - 10:00 Available
                Thursday 10:00 - 11:00 Available
Steven           403-600-6000 Thursday 11:00 - 12:00 Mens Cut
                Thursday 12:00 - 13:00 Available
Gabriela         368-111-9999 Thursday 13:00 - 14:00 Ladies Colouring
                Thursday 14:00 - 15:00 Available
                Thursday 15:00 - 16:00 Available
                Thursday 16:00 - 17:00 Available

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: |
```

### 10) Option 5 – Change Steven's appointment

```
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 5

Change an appointment for:
What day: Thursday
Enter start hour (24 hour clock): 11
Enter a new day: saturday
Enter start hour (24 hour clock): 12
Appointment for Steven has been changed to:
Day = Saturday
Time = 12

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: |
```

## 11) Option 3 – print calendar for Thursday and Saturday after changing Steven's appointment

```

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 3

** Print calendar for a specific day **
Enter day of week: Thursday
Appointments for Thursday

Client Name      Phone      Day      Start      End      Ty
-----
Gabriela         368-111-9999 Thursday 09:00 - 10:00 A
                  Thursday 10:00 - 11:00 A
                  Thursday 11:00 - 12:00 A
                  Thursday 12:00 - 13:00 A
                  Thursday 13:00 - 14:00 L
                  Thursday 14:00 - 15:00 A
                  Thursday 15:00 - 16:00 A
                  Thursday 16:00 - 17:00 A

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 5

Change an appointment for:
What day: Saturday
Enter start hour (24 hour clock): 12
Enter a new day: Saturday
Enter start hour (24 hour clock): 9
The new time slot is already booked

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 3

** Print calendar for a specific day **
Enter day of week: Saturday
Appointments for Saturday

Client Name      Phone      Day      Start      End      Ty
-----
Tyler            587-123-4567 Saturday 09:00 - 10:00 M
Stephanie       368-999-1111 Saturday 10:00 - 11:00 L
Steven          403-600-6000 Saturday 11:00 - 12:00 A
                  Saturday 12:00 - 13:00 M
                  Saturday 13:00 - 14:00 A
                  Saturday 14:00 - 15:00 A
                  Saturday 15:00 - 16:00 A
                  Saturday 16:00 - 17:00 A

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 5

```

## 12) Option 5 – Change Steven's appointment to a booked spot as Saturday at 9)

```

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 5

Change an appointment for:
What day: Saturday
Enter start hour (24 hour clock): 12
Enter a new day: Saturday
Enter start hour (24 hour clock): 9
The new time slot is already booked

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 5

```

### 13) Option 5 – Change a non-booked appointment Saturday at 11

```

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 5

Change an appointment for:
What day: Saturday
Enter start hour (24 hour clock): 11
That time slot isn't booked and doesn't need to be changed

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: █

```

### 14) option 6 – Calculate total fees for Saturday

```

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 6

Fees calculation per day....
What day: saturday
Total fees for Saturday is $140

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: █

```

### 15) Option 6 – Calculate total fees for invalid day as toosday/Sunday

```

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 6

Fees calculation per day....
What day: toosday
Toosday is invalid day or the salon is closed

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: █

```

```

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 6

Fees calculation per day....
What day: sunday
Sunday is invalid day or the salon is closed

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: █

```



### 16) Option 7 – Calculate total weekly fees

```
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 7
Total weekly fees is $220

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: █
```

### 17) Option 4 – Cancel Steven's appointment

```
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 4

** Cancel an appointment **
What day: saturday
Enter start hour (24 hour clock): 12
Appointment: Saturday 12:00 - 13:00 for Steven has been cancelled!

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: █
```

### 18) Option 2 – find Steven's appointment

```
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 2

** Find appointment by name **
Enter Client Name: steven
Appointments for steven

Client Name      Phone      Day      Start      End      Type
-----
No appointments found.

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: █
```



19) Option 4 – Cancel non-booked appointment as Saturday at 11

```
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 4

** Cancel an appointment **
What day: saturday
Enter start hour (24 hour clock): 11
That time slot isn't booked and doesn't need to be cancelled

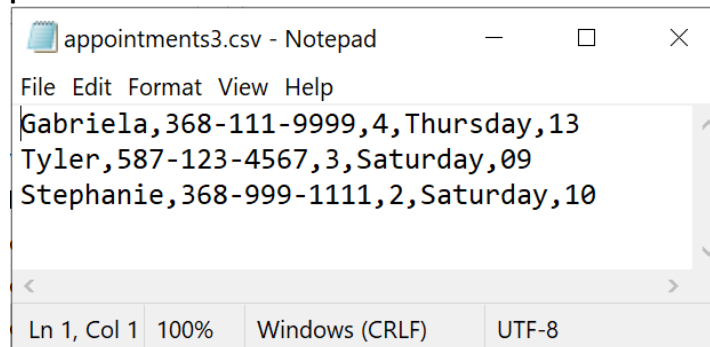
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: |
```

20) Option 9 – Exit the system with saving the scheduled appointments in another file as appointments3.csv

```
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 9

** Exit the system **
Would you like to save all scheduled appointments to a file (Y/N)? y
Enter appointment filename: appointments1.csv
File already exists. Do you want to overwrite it (Y/N)? n
Enter appointment filename: appointments3.csv
3 scheduled appointments have been successfully saved
Good Bye!
```

Here is the created appointments3.csv file



```
appointments3.csv - Notepad
File Edit Format View Help
Gabriela,368-111-9999,4,Thursday,13
Tyler,587-123-4567,3,Saturday,09
Stephanie,368-999-1111,2,Saturday,10
Ln 1, Col 1 100% Windows (CRLF) UTF-8
```

21) Option 9 – Exit the system without saving the scheduled appointments

```
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 9

** Exit the system **
Would you like to save all scheduled appointments to a file (Y/N)? N
Good Bye!
```

All the functionalities should work regardless of initial loading the scheduled appointments from the appointments1.csv file. The following is a sample.

**Initially start the program and test the program using the following test cases**

```
Starting the Appointment Manager System
Weekly calendar created
Would you like to load previously scheduled appointments from a file (Y/N)? n

=====
      Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: █
```

**Schedule a new appointment**

```
=====
      Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 1

** Schedule an appointment **
What day: monday
Enter start hour (24 hour clock): 13
Client Name: Maria
Client Phone: 403-700-7000
Appointment types
1: Mens Cut $40, 2: Ladies Cut $60, 3: Mens Colouring $40, 4: Ladies Colouring $80
Type of Appointment: 2
OK, Maria's appointment is scheduled!

=====
      Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: █
```

### Find the scheduled appointment

```
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 2

** Find appointment by name **
Enter Client Name: ma
Appointments for ma

Client Name      Phone      Day      Start      End      Type
-----
Maria            403-700-7000 Monday    13:00 - 14:00 Ladies Cut

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: |
```

### Calculate total weekly fees

```
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 7
Total weekly fees is $60

=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: |
```

### Exit the program and save all scheduled appointments in appointments4.csv

```
=====
Hair Salon Appointment Manager
=====
1) Schedule an appointment
2) Find appointment by name
3) Print calendar for a specific day
4) Cancel an appointment
5) Change an appointment
6) Calculate total fees for a day
7) Calculate total weekly fees
9) Exit the system
Enter your selection: 9

** Exit the system **
Would you like to save all scheduled appointments to a file (Y/N)? y
Enter appointment filename: appointments4.csv
1 scheduled appointments have been successfully saved
Good Bye!
```

### The created appointments.4.csv file

