

Welcome to our Movie Theater Management System!

Please enter your Staff ID and then your name.

```
LOG IN
-----
Enter staff ID: 1
Enter name: John
MAIN MENU
-----
Choose from the following:
1. Order movie ticket
2. Order food/drink
3. Show report
4. export report
5. Add/remove/display/update movie
6. Add/remove/display/update screen
7. Add/remove/display/update showtime
8. Add/remove/display/update food
9. Add/remove/display/update item
10. Add/remove/display/update staff
11. Add/remove/display/update recipe
12. Exit the program
```

Choose an option to get started.

Depending on the Staff ID and name, determines which job/job actions you can take. For example, John with Staff ID: 1 is a concession stand employee and can only access concession stand related options. The full list of employees and their ID numbers are as follows:

Concession Staff

- John (ID: 1)
- Logan (ID: 2)
- Tim (ID: 3)

Ticket Staff

- Edward (ID: 4)
- Michelle (ID: 5)
- Jack (ID: 6)

Order Food/Drink by selecting option 2.

- This will initiate a customer order for food. We start by taking the customer's name.
- Then, the customer needs to choose to add or remove from order. If the option is to add to the order, type 1.
- There will be a list of items the customer can choose from, for example let's say the customer wants 2 orders of popcorn and 2 orders of coke.
- The image below shows the process of adding the desired items. Once done, the program asks the customer if that will be all, and press y/n (yes/no) depending on their answer.

```
Enter customer's name: Heather
Choose:
1. Add order
2. Remove order
1
Choose from the following menu:
1. Burger: $11
2. Fanta: $3
3. Hot Dog: $3
4. Pizza: $10
5. Popcorn: $4
6. Pepsi: $3
7. Coke: $3
5
How many do you want? 2
Do you still want to order more? (y/n)y
Choose:
1. Add order
2. Remove order
1
Choose from the following menu:
1. Burger: $11
2. Fanta: $3
3. Hot Dog: $3
4. Pizza: $10
5. Popcorn: $4
6. Pepsi: $3
7. Coke: $3
7
How many do you want? 2
Do you still want to order more? (y/n)n
1. Popcorn: 2
2. Coke: 2
Is this correct? (y/n)y
How would you like to pay?
1. With card
2. With cash
2
Payment processed with cash.
```

Payment Process

The customer has the option to pay with cash or card.

- If cash, type 1.
- If card, type 2.
- After the payment type has been selected, a receipt for the order will be shown.

```
How would you like to pay?
1. With card
2. With cash
2
Payment processed with cash.
-----
Order #2025-04-13-0001
This order is for Heather
-----
Food           Qty           price per qty
-----
Popcorn        2             $4
Coke           2             $3
-----
Total price is $14, paid with cash
Thank you for eating with us!
Transaction completed!
-----
-----
Choose from the following:
1. Order movie ticket
2. Order food/drink
3. Show report
4. export report
5. Add/remove/display/update movie
6. Add/remove/display/update screen
7. Add/remove/display/update showtime
8. Add/remove/display/update food
9. Add/remove/display/update item
10. Add/remove/display/update staff
11. Add/remove/display/update recipe
12. Exit the program
```

You will now be taken back to the home screen, ready for a new customer!

If you are a Ticket Stand Employee, you are responsible for Ticket Sales. Enter your Staff ID and Name to get started. For example we will use Staff ID 4 and Staff member Edward as an example.

Select option 1 to get started on placing orders related to Movie Tickets.

- This will initiate a ticket sale for a customer. We start by taking the customer's name.
- Select 1 to add to the ticket order, or 2 if they decide to not purchase tickets.
- If option 1 is selected, the customer needs to decide on which movie they would like to see.
- For example, let's say the customer wants 2 tickets to see Star Wars, select option 1.

```
Enter staff ID: 4
Enter name: Edward
MAIN MENU
-----
Choose from the following:
1. Order movie ticket
2. Order food/drink
3. Show report
4. export report
5. Add/remove/display/update movie
6. Add/remove/display/update screen
7. Add/remove/display/update showtime
8. Add/remove/display/update food
9. Add/remove/display/update item
10. Add/remove/display/update staff
11. Add/remove/display/update recipe
12. Exit the program
1
Enter customer's name: Ivan
Choose:
1. Add order
2. Remove order
1
Select movie:
1. Star Wars
   Movie duration: 124 minutes
   Movie genre: Science Fiction
2. Back To The Future
   Movie duration: 116 minutes
   Movie genre: Science Fiction
3. Jaws
   Movie duration: 130 minutes
   Movie genre: Thriller
4. Lord Of The Rings
   Movie duration: 201 minutes
   Movie genre: Fantasy
5. 28 Days Later
   Movie duration: 113 minutes
   Movie genre: Thriller
6. The Mummy
   Movie duration: 124 minutes
   Movie genre: Action
1
Normal screen price: $10
Imax screen price: $15
Here is the schedule for the movie 'Star Wars':
-----
```

- You will then be shown a schedule for the selected movie. Let's say the customer wants the showtime of 10:00, select 1.

Now you, the staff member, needs to enter the seat(s) the customer is wanting to sit in and watch the movie. This is organized by rows and columns. Enter in the format as follows if the customer wants (for example) the first two front row seats on the left side of the theater.

o 1 1

- Row 1 Column 1

o 1 2

- Row 1 Column 2

It is important you add a space between the numbers!

```
Here is the schedule for the movie 'Star Wars':
```

```
-----  
Showtime ID #1  
Screen room # 1  
Screen type: imax  
Start time: 10:00  
End time: 12:04  
-----
```

```
Showtime ID #2  
Screen room # 1  
Screen type: imax  
Start time: 15:00  
End time: 17:04  
-----
```

```
Enter the showtime ID you want:
```

```
1
```

```
0 0 0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0
```

```
1 1
```

```
Select another seat? (y/n) y
```

```
X 0 0 0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0
```

```
1 2
```

```
Select another seat? (y/n) n
```

```
Do you still want to order more? (y/n)n
```

```
2 tickets of Movie 'Star Wars'.
```

```
Screen room #1; type: imax
```

```
The price for each ticket is $15
```

```
The following is the seats you ordered:
```

```
- Seat at (1, 1)
```

```
- Seat at (1, 2)
```

```
Is this correct? (y/n)y
```

· Finally, the customer needs to select a payment option, opting to pay with cash or card, similar to the above demonstration, and then you will receive the ticket receipt.

· **It is important to follow the prompts to continue with y/n (yes/no)!**

```
How would you like to pay?
1. With card
2. With cash
1
Payment processed with card.
-----
Order #2025-04-13-0001
Order Name: Ivan
-----
Movie: 'Star Wars'
Start time: 10:00
Screen room #1
-----
Ticket type      Qty      Total price
-----
IMAX ticket      2        $30
-----
Seats ordered:
  - Seat at (1, 0)
  - Seat at (1, 1)
-----
Total price is $30, paid with card
Thank you for watching with us!
Transaction completed!
-----
-----
```

Any Staff member can access options 3-4

Option 3 (Show Report) is to show the Ticket Sales, Food Sales, Inventory and Item Order History reports of the movie theater.

If you select option 3, you will be shown the following:

```
3
-----
Which report would you like to generate?
1. Ticket sales report
2. Food sales report
3. Inventory report
4. Item order history report
```

To generate Ticket Sales reports, Staff members must type 1.

In order to generate a report, the program will ask for the Start: Day, Month, and Year of the report you are looking for, as well as the End: Day, Month, and Year.

Let us say we wanted to generate the Ticket sales report for the week of April 6th, 2025. This is what the report would print:

```
Which report would you like to generate?
1. Ticket sales report
2. Food sales report
3. Inventory report
4. Item order history report
1
Enter start time:
  Enter the day:6
  Enter the month:4
  Enter the year:2025
Enter end time:
  Enter the day:12
  Enter the month:4
  Enter the year:2025
Below is the ticket sales report for the specified time period:
Payment ID      |Timestamp      |Total  |Qty  |Type  |Screen ID|Movie      |Start  |Seats
-----|-----|-----|-----|-----|-----|-----|-----|-----
2025-04-07-0001 |2025-04-07T19:52|$15    |1    |imax  |1        |Star Wars  |10:00  |(0,0)
-----|-----|-----|-----|-----|-----|-----|-----|-----
2025-04-07-0002 |2025-04-07T19:54|$10    |1    |normal|6        |The Mummy  |13:00  |(1,1)
-----|-----|-----|-----|-----|-----|-----|-----|-----
2025-04-08-0001 |2025-04-08T15:25|$10    |1    |normal|6        |The Mummy  |13:00  |(4,5)
-----|-----|-----|-----|-----|-----|-----|-----|-----
2025-04-08-0002 |2025-04-08T18:39|$20    |2    |normal|6        |The Mummy  |16:00  |(2,3), (2,4)
-----|-----|-----|-----|-----|-----|-----|-----|-----
2025-04-08-0003 |2025-04-08T18:40|$15    |1    |imax  |1        |Star Wars  |10:00  |(0,0)
-----|-----|-----|-----|-----|-----|-----|-----|-----
2025-04-08-0004 |2025-04-08T18:42|$15    |1    |imax  |1        |Star Wars  |10:00  |(0,0)
-----|-----|-----|-----|-----|-----|-----|-----|-----
```

The program then returns to the Main Menu.

To generate the Food sales report, repeat the process for Staff ID, Name and Show report. Staff members can then type 2 to generate the Food sales report.

The program will again ask for the Start: Day, Month, and Year of the report,, as well as the End: Day, Month, and Year.

To represent the Food sales report for the theater, we will utilize the same dates for the week of April 6th, 2025.

The report is as follows:

```
Which report would you like to generate?
1. Ticket sales report
2. Food sales report
3. Inventory report
4. Item order history report
2
Enter start time:
  Enter the day:6
  Enter the month:4
  Enter the year:2025
Enter end time:
  Enter the day:12
  Enter the month:4
  Enter the year:2025
Below is the food sales report for the specified time period:
Payment ID      |Date & Time      |Food Name      |Qty  |Price
-----
2025-04-07-0001 |2025-04-07T19:52 |Burger         |3    |$33
                |                  |Fanta          |2    |$6
                |                  |Hot Dog        |5    |$15
                |                  |total Price|$54
-----
2025-04-07-0002 |2025-04-07T19:52 |Coke           |2    |$6
                |                  |total Price|$6
-----
2025-04-07-0003 |2025-04-07T20:54 |Burger         |5    |$55
```

Options 3 (Inventory report) and 4 (Item order history report) for Show Report follow the same instructions producing the following results for the week of April 6th, 2025:

Inventory Report:

```
Which report would you like to generate?
1. Ticket sales report
2. Food sales report
3. Inventory report
4. Item order history report
3
Below is the current content of the inventory:
Item Name      |Quantity
-----
buns           |18
tomato         |34
cheese         |23
meat           |46
soda           |99
sausage        |51
dough          |76
corn           |99
-----
```

Item order history report:


```
Which report would you like to generate?
1. Ticket sales report
2. Food sales report
3. Inventory report
4. Item order history report
4
Enter start time:
  Enter the day:6
  Enter the month:4
  Enter the year:2025
Enter end time:
  Enter the day:12
  Enter the month:4
  Enter the year:2025
Below is the inventory item order history:
Date & Time      |Name      |Qty      |Total Price
-----
2025-04-08T15:21 |buns      |250      |$250
2025-04-08T15:21 |tomato    |250      |$250
2025-04-08T15:21 |cheese    |250      |$500
2025-04-08T18:02 |dough     |250      |$750
2025-04-08T18:02 |corn      |250      |$250
2025-04-08T18:36 |buns      |250      |$250
2025-04-09T12:05 |buns      |250      |$250
2025-04-10T10:57 |buns      |250      |$250
2025-04-11T16:14 |buns      |250      |$250
-----
```

Option 4 on the Main Menu is to export all of the reports for the movie theater: Ticket sales report, Food sales report, Inventory, and Item order history report.

This option exports the selected reports to a text file where they can be stored even after the program has ended.

Nothing is printed for the user during this operation.

Option 5 provided in the Main Menu of our Movie Theater system handles the Addition, Removal, Display, and Update of the Movies offered within the theater.

Staff members are able to add, remove, update and display movies. Our program ensures that only movies of unique movie ID’s are able to be added to the theater, checking if a given movie ID currently exists.

```
LOG IN
-----
Enter staff ID: 4
Enter name: Edward
MAIN MENU
-----
Choose from the following:
1. Order movie ticket
2. Order food/drink
3. Show report
4. export report
5. Add/remove/display/update movie
6. Add/remove/display/update screen
7. Add/remove/display/update showtime
8. Add/remove/display/update food
9. Add/remove/display/update item
10. Add/remove/display/update staff
11. Add/remove/display/update recipe
12. Exit the program
5
Choose:
-----
1. Add movie
2. Remove movie
3. Display movie
4. Update movie
5. Return
```

Similarly, for the Remove option, our program ensures that the movie ID provided exists within the theater.

```

Choose:
-----
1. Add movie
2. Remove movie
3. Display movie
4. Update movie
5. Return
2
Which movie do you want to remove:
1. Star Wars
2. Back To The Future
3. Jaws
4. Lord Of The Rings
5. 28 Days Later
6. The Mummy
7
Movie does not exist!
Choose:
-----
1. Add movie
2. Remove movie
3. Display movie
4. Update movie
5. Return

```

If a movie's information was input incorrectly, it can be updated so that the system displays the correct movie information.

If there are no changes needed for the Movies within the movie theater, the user can select option 4 of the submenu to return to the main menu.

Option 6 provided in the Main Menu of our Movie Theater system handles the Addition, Removal, Display, and Update of the Movie Screens available within the theater.

Staff members are able to add, remove, update, and display the screens a movie will be played on. Our program ensures that screens with unique ID can only be created so that there is no overlap between movies being played.

```

Choose from the following:
1. Order movie ticket
2. Order food/drink
3. Show report
4. export report
5. Add/remove/display/update movie
6. Add/remove/display/update screen
7. Add/remove/display/update showtime
8. Add/remove/display/update food
9. Add/remove/display/update item
10. Add/remove/display/update staff
11. Add/remove/display/update recipe
12. Exit the program
6
Choose:
-----
1. Add screen
2. Remove screen
3. Display screen
4. Update screen
5. Return

```

If a screen needs to be removed from the theater, the program checks to make sure the input screen ID exists within the theater.

```
Choose:
-----
1. Add screen
2. Remove screen
3. Display screen
4. Update screen
5. Return
2
Which screen do you want to remove:
1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
9
Screen does not exist!
Choose:
-----
1. Add screen
2. Remove screen
3. Display screen
4. Update screen
5. Return
```

If a screen needs to be updated, the program provides a list of all available screens that exist within the theater, allowing staff to update as needed.

If there are no changes needed for the Movie Screens within the movie theater, the user can select option 4 of the submenu to return to the main menu.

Option 7 provided in the Main Menu of our Movie Theater system handles the Addition, Removal, Display, and Update of the Movie Showtimes offered within the theater.

Staff members are able to add, remove, update, and display the showtimes for a movie. Our program ensures that only unique showtimes can be created so that there is no overlap between movies being played at a given time.

```
Choose from the following:
1. Order movie ticket
2. Order food/drink
3. Show report
4. export report
5. Add/remove/display/update movie
6. Add/remove/display/update screen
7. Add/remove/display/update showtime
8. Add/remove/display/update food
9. Add/remove/display/update item
10. Add/remove/display/update staff
11. Add/remove/display/update recipe
12. Exit the program
7
Choose:
-----
1. Add showtime
2. Remove showtime
3. Display showtime
4. Update showtime
5. Return
|
```

If a showtime needs to be removed from the theater, the program checks to make sure the selected showtime matches a showtime existing within the theater.

If a showtime needs to be updated, the program provides a list of all available showtimes that exist within the theater, allowing staff to update as needed.

```
Choose:
-----
1. Add showtime
2. Remove showtime
3. Display showtime
4. Update showtime
5. Return
4
Which showtime do you want to update: 1. Star Wars
    imax screen
    Starts at 10:00
2. Star Wars
    imax screen
    Starts at 15:00
3. Back To The Future
    imax screen
    Starts at 12:00
4. Jaws
    normal screen
    Starts at 13:00
5. Jaws
    normal screen
    Starts at 10:00
6. Jaws
    normal screen
    Starts at 15:00
7. Lord Of The Rings
    normal screen
    Starts at 11:00
```

If there are no changes needed for the Movie Showtimes within the movie theater, the user can select option 4 of the submenu to return to the main menu.

Option 8 provided in the Main Menu of our Movie Theater system handles the Addition, Removal, Display, and Update of the Food offered within the theater.

```
Choose from the following:
1. Order movie ticket
2. Order food/drink
3. Show report
4. export report
5. Add/remove/display/update movie
6. Add/remove/display/update screen
7. Add/remove/display/update showtime
8. Add/remove/display/update food
9. Add/remove/display/update item
10. Add/remove/display/update staff
11. Add/remove/display/update recipe
12. Exit the program
8
Choose:
-----
1. Add food
2. Remove food
3. Display food
4. Update food
5. Return
|
```

Food staff members are able to add, remove, update, and display the food available at the movie theater. Our program ensures that only unique food items can be added.

```
Choose:
-----
1. Add food
2. Remove food
3. Display food
4. Update food
5. Return
1
Enter food id: 1
Enter food name: burger
Enter the price: 11
Food with id 1 already exists
```

If a food item needs to be removed from the theater menu, the program checks to make sure the selected food item matches an item that already exists within the theater.

If a food item needs to be updated, the program provides a list of all available food items on the menu that exist within the theater, allowing staff to update as needed.

```
Choose:
-----
1. Add food
2. Remove food
3. Display food
4. Update food
5. Return
4
Which food do you want to update:
1. Burger
2. Fanta
3. Hot Dog
4. Pizza
5. Popcorn
6. Pepsi
7. Coke
|
```

Option 9 provided in the Main Menu of our Movie Theater system handles the Addition, Removal, Display, and Update of the Items used for the Food and Recipes available within the theater.

```

Choose from the following:
1. Order movie ticket
2. Order food/drink
3. Show report
4. export report
5. Add/remove/display/update movie
6. Add/remove/display/update screen
7. Add/remove/display/update showtime
8. Add/remove/display/update food
9. Add/remove/display/update item
10. Add/remove/display/update staff
11. Add/remove/display/update recipe
12. Exit the program
9
Choose:
-----
1. Add item
2. Remove item
3. Display item
4. Update item
5. Return
|

```

Food staff members are able to add, remove, update, and display the Items available within the movie theater. Our program ensures that only unique Items can be added.

```

Choose:
-----
1. Add item
2. Remove item
3. Display item
4. Update item
5. Return
7
Enter item id: 1
Enter item name: bun
Enter initial quantity: 20
Enter buying cost from supplier: 200
Item with id 1 already exists
Choose:
-----
1. Add item
2. Remove item
3. Display item
4. Update item
5. Return

```

If an item needs to be removed from the theater menu, the program checks to make sure the selected item matches an item that already exists within the theater.

If an item needs to be updated, the program provides a list of all available food items on the menu that exist within the theater, allowing staff to update as needed.

```
Choose:
-----
1. Add item
2. Remove item
3. Display item
4. Update item
5. Return
4
Which item do you want to update:
1. buns
2. tomato
3. cheese
4. meat
5. soda
6. sausage
7. dough
8. corn
|
```

Option 10 provided in the Main Menu of our Movie Theater system handles the Addition, Removal, Display, and Update of the Staff employed within the theater.

```
Choose from the following:
1. Order movie ticket
2. Order food/drink
3. Show report
4. export report
5. Add/remove/display/update movie
6. Add/remove/display/update screen
7. Add/remove/display/update showtime
8. Add/remove/display/update food
9. Add/remove/display/update item
10. Add/remove/display/update staff
11. Add/remove/display/update recipe
12. Exit the program
10
Choose:
-----
1. Add staff
2. Remove staff
3. Display staff
4. Update staff
5. Return
|
```

Movie theater staff members are able to add, remove, update, and display the Staff currently working within the movie theater. Our program ensures that only unique Staff members can be added.

```

Choose:
-----
1. Add staff
2. Remove staff
3. Display staff
4. Update staff
5. Return
1
Enter staff id: 2
Enter staff name: Logan
Enter hourly rate: 12
Enter schedule (HH:mm-HH:mm): 08:00-16:00
Choose staff role:
1. Ticket staff
2. Food staff
2
Staff with id 2 already exists
Choose:
-----
1. Add staff
2. Remove staff
3. Display staff
4. Update staff
5. Return

```

If a staff member needs to be removed from the theater, the program checks to make sure the selected staff member matches a staff ID that already exists within the theater's system.

If a staff member's information needs to be updated, the program provides a list of all available staff within the theater, allowing for updates to be made as needed.

```

Choose:
-----
1. Add staff
2. Remove staff
3. Display staff
4. Update staff
5. Return
4
Which staff do you want to update:
1. John
2. Logan
3. Tim
4. Edward
5. Michelle
6. Jack

```

Option 11 provided in the Main Menu of our Movie Theater system handles the Addition, Removal, Display, and Update of the Recipes used within the theater.

```

Choose from the following:
1. Order movie ticket
2. Order food/drink
3. Show report
4. export report
5. Add/remove/display/update movie
6. Add/remove/display/update screen
7. Add/remove/display/update showtime
8. Add/remove/display/update food
9. Add/remove/display/update item
10. Add/remove/display/update staff
11. Add/remove/display/update recipe
12. Exit the program
11
Choose:
-----
1. Add recipe
2. Remove recipe
3. Display recipe
4. Update recipe quantity
5. Return

```


Food Staff members are able to add, remove, update, and display the Recipes currently used within the movie theater.

When looking to add to a recipe, the program provides staff members with a list of food items currently used within the theater's food menu. Staff members can then select a food item they would like to adjust the recipe of.

```
Choose:
-----
1. Add recipe
2. Remove recipe
3. Display recipe
4. Update recipe quantity
5. Return
1
Choose which food:
1. Burger
2. Fanta
3. Hot Dog
4. Pizza
5. Popcorn
6. Pepsi
7. Coke
```

If a food item recipe needs to be removed from the theater's food menu, the program checks to make sure the selected food item exists within the theater's food menu.

If a recipe's information needs to be updated, the program provides a list of all available food menu items within the theater, allowing for updates to be made as needed.

```
Choose:
-----
1. Add recipe
2. Remove recipe
3. Display recipe
4. Update recipe quantity
5. Return
4
Choose which food:
1. Burger
2. Fanta
3. Hot Dog
4. Pizza
5. Popcorn
6. Pepsi
7. Coke
1
Choose which item:
1. buns; requiring 2 unit to make a single Burger
2. tomato; requiring 1 unit to make a single Burger
3. cheese; requiring 1 unit to make a single Burger
4. meat; requiring 1 unit to make a single Burger
```

Option 12 provided on the Main Menu allows the user to exit the movie theater program, ending their time at our theater.

```
Choose from the following:
1. Order movie ticket
2. Order food/drink
3. Show report
4. export report
5. Add/remove/display/update movie
6. Add/remove/display/update screen
7. Add/remove/display/update showtime
8. Add/remove/display/update food
9. Add/remove/display/update item
10. Add/remove/display/update staff
11. Add/remove/display/update recipe
12. Exit the program
12
Exiting the program...
-----
```

Thanks for visiting!!!