Assignment

Courier Management System

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Assignment: Courier Management System

GITHUB link:

https://github.com/Harish0562/Courier_Management_System_Assignment.git

Task 1: Control Flow Statements

1. Write a program that checks whether a given order is delivered or not based on its status (e.g., "Processing," "Delivered," "Cancelled"). Use if-else statements for this.

```
PS C:\Users\91776\OneDrive\Desktop\Hexaware\Assignment> & "C:/Program Files/Python312/python.exe"
:/Users/91776/OneDrive/Desktop/Hexaware/Assignment/task1_1.py
The order has been delivered.
```

2. Implement a switch-case statement to categorize parcels based on their weight into "Light," "Medium," or "Heavy."

```
PS C:\Users\91776\OneDrive\Desktop\Hexaware\Assignment> & "C:/Program Files/Python312/python.exe" c
:/Users/91776/OneDrive/Desktop/Hexaware/Assignment/task1_2.py
Medium
```

3. Implement User Authentication 1. Create a login system for employees and customers using Java control flow statements.

```
PS C:\Users\91776\OneDrive\Desktop\Hexaware\Assignment> & "C:/Program Files/Python312/python.exe" c:/Users/91776/OneDrive/Desktop/Hex
aware/Assignment/task1_3.py
Login successful!
```

4. Implement Courier Assignment Logic 1. Develop a mechanism to assign couriers to shipments based on predefined criteria (e.g., proximity, load capacity) using loops.

```
PS C:\Users\91776\OneDrive\Desktop\Hexaware\Assignment> & "C:/Program Files/Python312/python.exe" c:/Users/91776/OneDrive/Desktop/Hex
aware/Assignment/task1_4.py
{1: 'Alice', 2: 'Bob'}
```

Task 2: Loops and Iteration

5. Write a Java program that uses a for loop to display all the orders for a specific customer.

```
PS C:\Users\91776\OneDrive\Desktop\Hexaware\Assignment> & "C:/Program Files/Python312/python.exe" c:/Users/91776/OneDrive/Desktop/Hex
aware/Assignment/task2_1.py
Orders for customer 1:
{'id': 1, 'customer_id': 1}
{'id': 3, 'customer_id': 1}
```

6. Implement a while loop to track the real-time location of a courier until it reaches its destination.

```
PS C:\Users\91776\OneDrive\Desktop\Hexaware\Assignment> & "C:/Program Files/Python312/python.exe" c:/Users/91776/OneDrive/Desktop/Hex
aware/Assignment/task2_2.py
Tracking courier 1: Location A
Tracking courier 1: Location B
Tracking courier 1: Location C
Courier 1 has reached the destination.
```

Task 3: Arrays and Data Structures

7. Create an array to store the tracking history of a parcel, where each entry represents a location update.

```
PS C:\Users\91776\OneDrive\Desktop\Hexaware\Assignment> & "C:/Program Files/Python312/python.exe" c:/Users/91776/OneDrive/Desktop/Hex
aware/Assignment/task3_1.py
Tracking history for parcel 1:
Location A
Location B
In Transit
Delivered
```

8. Implement a method to find the nearest available courier for a new order using an array of couriers.

```
PS C:\Users\91776\OneDrive\Desktop\Hexaware\Assignment> & "C:/Program Files/Python312/python.exe" c:/Users/91776/OneDrive/Desktop/Hex
aware/Assignment/task3_2.py
Alice
```

Task 4: Strings,2d Arrays, user defined functions,Hashmap

9. Parcel Tracking: Create a program that allows users to input a parcel tracking number.Store the tracking number and Status in 2d String Array. Initialize the array with values. Then, simulate the tracking process by displaying messages like "Parcel in transit," "Parcel out for delivery," or "Parcel delivered" based on the tracking number's status.

```
PS C:\Users\91776\OneDrive\Desktop\Hexaware\Assignment> & "C:/Program Files/Python312/python.exe" c:/Users/91776/OneDrive/Desktop/Hex
aware/Assignment/task4_1.py
Parcel TRACK001 is In Transit
```

10. Customer Data Validation: Write a function which takes 2 parameters, data-denotes the data and detail-denotes if it is name addtress or phone number.Validate customer information based on following critirea. Ensure that names contain only letters and are properly capitalized, addresses do not contain special characters, and phone numbers follow a specific format (e.g., ###-###-####).

```
PS C:\Users\91776\OneDrive\Desktop\Hexaware\Assignment> & "C:/Program Files/Python312/python.exe" c:/Users/91776/OneDrive/Desktop/Hex
aware/Assignment/task4_2.py
True
True
True
```

11. Address Formatting: Develop a function that takes an address as input (street, city, state, zip code) and formats it correctly, including capitalizing the first letter of each word and properly formatting the zip code.

```
PS C:\Users\91776\OneDrive\Desktop\Hexaware\Assignment> & "C:/Program Files/Python312/python.exe" c:/Users/91776/OneDrive/Desktop/Hex
aware/Assignment/task4_3.py
123 Main St, Springfield, IL 62704
```

12. Order Confirmation Email: Create a program that generates an order confirmation email. The email should include details such as the customer's name, order number, delivery address, and expected delivery date.

```
PS C:\Users\91776\OneDrive\Desktop\Hexaware\Assignment> & "C:/Program Files/Python312/python.exe" c:/Users/91776/OneDrive/Desktop/He
aware/Assignment/task4_4.py
Order Confirmation

Customer: Arjun
Order Number: ORD123
Delivery Address: 123 Main St, Springfield, IL
Expected Delivery Date: 2023-09-10
```

13. Calculate Shipping Costs: Develop a function that calculates the shipping cost based on the distance between two locations and the weight of the parcel. You can use string inputs for the source and destination addresses.

```
PS C:\Users\91776\OneDrive\Desktop\Hexaware\Assignment> & "C:/Program Files/Python312/python.exe" c:/Users/91776/OneDrive/Desktop/Hex
aware/Assignment/task4_5.py
10.0
```

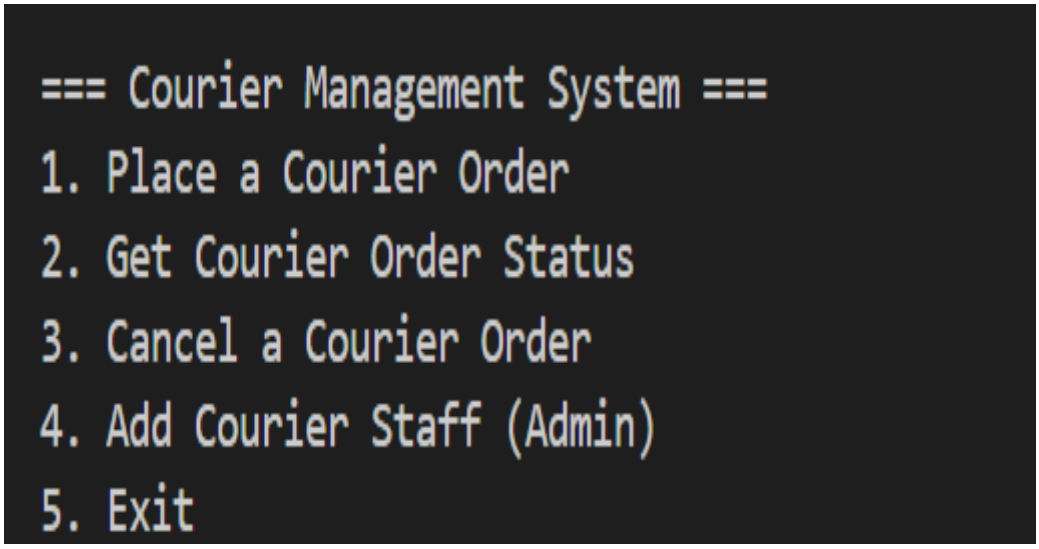
14. Password Generator: Create a function that generates secure passwords for courier system accounts. Ensure the passwords contain a mix of uppercase letters, lowercase letters, numbers, and special characters.

```
PS C:\Users\91776\OneDrive\Desktop\Hexaware\Assignment> & "C:/Program Files/Python312/python.exe" c:/Users/91776/OneDrive/Desktop/Hex
aware/Assignment/task4_6.py
?_hsY2bmp|+L
```

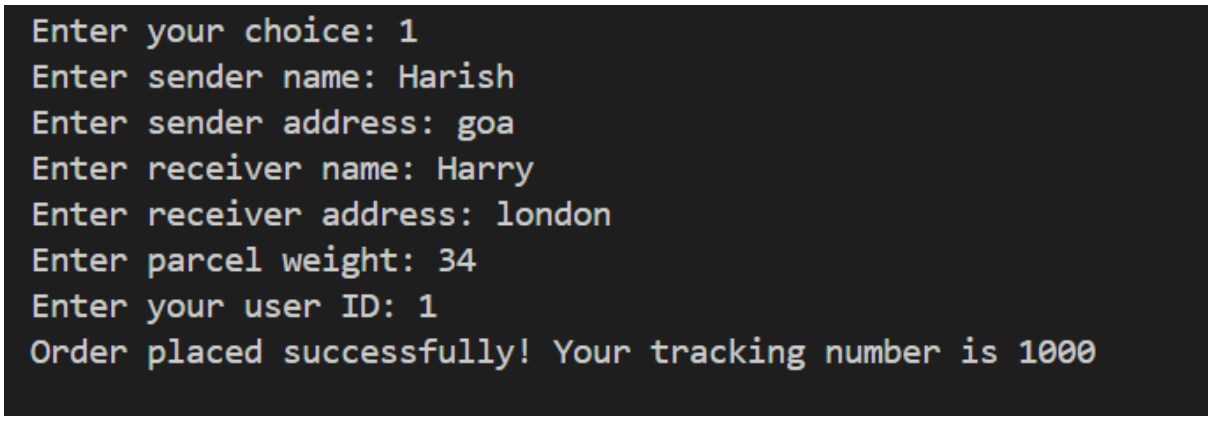
15. Find Similar Addresses: Implement a function that finds similar addresses in the system. This can be useful for identifying duplicate customer entries or optimizing delivery routes.Use string functions to implement this.

```
PS C:\Users\91776\OneDrive\Desktop\Hexaware\Assignment> & "C:/Program Files/Python312/python.exe" c:/Users/91776/OneDrive/Desktop/Hex
aware/Assignment/task4_7.py
'123 Main Street' and '123 Main St.' are 84.62% similar.
'123 Main Street' and '124 Main Street' are 93.33% similar.
'123 Main Street' and '123 Mainstreet' are 96.55% similar.
'123 Main Street' and '123 Mian St' are 76.92% similar.
'123 Main St.' and '123 Main Street' are 84.62% similar.
'123 Main St.' and '124 Main Street' are 76.92% similar.
'123 Main St.' and '123 Mainstreet' are 80.00% similar.
'123 Main St.' and '123 Mian St' are 90.91% similar.
'124 Main Street' and '123 Main Street' are 93.33% similar.
'124 Main Street' and '123 Main St.' are 76.92% similar.
'124 Main Street' and '123 Mainstreet' are 89.66% similar.
'123 Mainstreet' and '123 Main Street' are 96.55% similar.
'123 Mainstreet' and '123 Main St.' are 80.00% similar.
'123 Mainstreet' and '124 Main Street' are 89.66% similar.
'123 Mian St' and '123 Main Street' are 76.92% similar.
'123 Mian St' and '123 Main St.' are 90.91% similar.
```

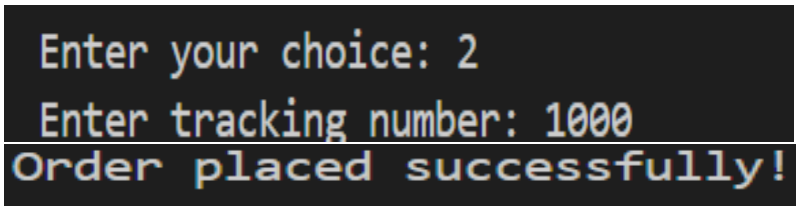
Task 5,6,7,8,9:



1) Place a Courier Order:



2) Get Courier Order by Status:



3) Cancel a Courier Order:

```
Enter your choice: 3
Enter tracking number to cancel: 1000
Order canceled successfully.
```

4) Add Courier Staff (Admin):

```
Enter your choice: 4
Enter employee ID: 10
Enter employee name: Ethan
Enter employee email: behzinga@gmail.com
Enter employee contact number: 123456789
Enter employee role: Sidemen
Enter employee salary: 1000000
Employee added successfully! Employee ID is 10
```

5) Exit:

```
=== Courier Management System ===
1. Place a Courier Order
2. Get Courier Order Status
3. Cancel a Courier Order
4. Add Courier Staff (Admin)
5. Exit
Enter your choice: 5
Exiting the system. Goodbye!
```