DISCUSSION OF CODE

1-Alhassan Marwan Hassan--231008622
2-Ziad Hazem Mohammed--231018371
3-Abdallah Ahmed Abdelmohsen—231018116
4-Ahmed Adel –231018517
GROUP- (i)

User Management

- **User Structure**: Defines a `User` with a username, password, and access level (0 for customer, 1 for agent, 2 for admin).
- **User Database**: Stores registered users in an array `users`.
- **Functions**:
    - `register_user()`: Allows new users to register by entering their username, password, and access level. This information is saved to a file named `registration.txt`.
    - `authenticate()`: Checks if the provided username and password match any user in `registration.txt`. If a match is found, it returns `true` and sets the user's access level.

Customer Management

- **Customer Structure**: Defines a `Customer` with attributes like name, address, phone, email, and arrays for policies and claims.
- **Customer Database**: Stores customers in an array `customers`.
- **Functions**:
    - `addCustomer()`: Allows adding a new customer by entering their details and saving them to `customers.txt`.
    - `updateCustomer()`: Allows updating an existing customer's details by searching for them by name.
    - `viewCustomer()`: Displays details of a customer by their name.
    - `customerAccess()`: Allows customers to view their policies by entering their name.

Policy Management

- **Policy Structure**: Defines a `Policy` with attributes like policy number, type, coverage details, premium amount, start and end dates, and beneficiaries.
- **Policy Database**: Stores policies in an array `policies`.
- **Functions**:

- o `createPolicy()`: Allows creating a new policy by entering its details.
- o `viewPolicies()`: Displays all policies.
- o `searchPolicy()`: Allows searching for a policy by its number.
- o `updatePolicy()`: Allows updating the premium amount of a policy by its number.

Claims Processing

- **Claim Structure**: Defines a `Claim` with attributes like claim ID, type, date, description, and status.
- **Functions**:
  - o `initiateClaim()`: Allows initiating a new claim by entering its details.
  - o `reviewClaim()`: Updates the status of a claim to "Under Review".
  - o `approveClaim()`: Updates the status of a claim to "Approved".
  - o `viewStatus()`: Displays the details and status of a claim.

Employee Management

- **Employee Structure**: Defines an `Employee` with attributes like employee ID, name, sales, and revenue generated.
- **Functions**:
  - o `generateSalesPerformanceReport()`: Generates and displays a report of all employees' sales and revenue generated.
  - o `generatePerformanceInsights()`: Calculates and displays insights like total sales, total revenue, and average revenue per sale.

Main Menu

The main function displays a menu with options to register, log in, and manage customers, policies, claims, and employees. Depending on the user's choice, the corresponding function is called. The loop continues until the user chooses to exit.