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PROJECT TITLE:

BLOOD DONOR REG.

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Slide 1: Title Slide

- **Title**: Blood Donor Registration System
- **Subtitle**: Source Code Overview and Explanation
- **Your Name**
- **Date**

Slide 2: Introduction

- **Project Overview**:
  - The **Blood Donor Registration System** is a Python-based application designed to collect, validate, and store information about blood donors.
  - The system ensures that the donors are eligible based on age, health status, and donation history before registering them.
- **Purpose**:
  - To manage blood donor registrations and ensure that only eligible donors are approved for blood donation.
  - This system is designed to streamline the process for both blood donors and administrators.

Slide 3: Key Features

- **Eligibility Check**:
  - Ensures that donors meet the following criteria:
    - **Age**: Must be over 18.
    - **Health Status**: Must be "healthy."
    - **Last Donation**: At least 3 months must have passed since the last donation.
- **Donor Registration**:
  - Collects personal details: name, age, phone number, address, health status, and last donation date.
- **Multiple Registrations**:
  - Allows multiple blood donors to be registered in one session.
- **Data Validation**:
  - Ensures that all inputs are valid and meets the eligibility conditions.

Slide 4: Code Overview

1. **Imports**:
   - `import datetime`: Used for handling date and time operations, specifically to calculate the time difference between the current date and the last blood donation date.
2. **Function 1: `is_eligible`**:
   - Purpose: Check whether the donor meets the eligibility criteria.
   - Criteria:

        - **Age**: The donor must be over 18 years old.
        - **Health Status**: The donor must be in good health (status must be "healthy").
        - **Last Donation**: The donor must not have donated blood within the last 3 months.
3. **Function 2: `get_blood_donor_details`**:
    - Purpose: Collect donor information and validate eligibility.
    - Collects:
        - Name, age, phone number, address, health status, and last donation date.
    - Performs validation on age, health status, and last donation date.
    - If the donor is eligible, their data is saved and returned.
4. **Function 3: `main`**:
    - Purpose: Drive the registration process.
    - Collects multiple donors' details and stores them.
    - Displays the list of all registered donors at the end of the process.

Slide 5: Detailed Explanation of Key Functions

1. `is_eligible` Function

python
Copy code

```
def is_eligible(age, health_status, last_donation_date):
```

- **Purpose**: Validates donor eligibility.
- **Conditions**:
    - **Age**: The donor must be older than 18 years.
    - **Health Status**: The donor must be in good health (status "healthy").
    - **Last Donation**: The donor cannot donate if it has been less than 90 days (3 months) since their last donation.
- **Logic**:
    - If the age is less than or equal to 18, the donor is not eligible.
    - If health status is not "healthy," the donor is not eligible.
    - If the difference between the current date and the last donation is less than 3 months, the donor is not eligible.

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2. `get_blood_donor_details` Function

python
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```
def get_blood_donor_details():
```

- **Purpose**: Collects donor's details and checks their eligibility.
- **Steps**:
    - Collects the donor's personal details: name, age, phone number, address.

- Asks the donor about their health status (Yes/No).
- If the donor answers "Yes," it collects the last donation date.
- Validates the input for correctness.
- If the donor is eligible (via the `is_eligible` function), their details are returned.

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3. `main` Function

python
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```
def main():
```

- **Purpose**: Manages the flow of the application.
- **Steps**:
  - Creates an empty list `donors` to store donor data.
  - In a loop, it asks for donor details and registers eligible donors.
  - It keeps asking if the user wants to register another donor until they say "No."
  - At the end, the program prints a list of all registered blood donors.

Slide 6: Code Flow

1. **Start**:
   - The program begins by calling the `main` function.
   - It prompts the user for donor information.
2. **Eligibility Check**:
   - After collecting the donor's details, the `is_eligible` function is called to check if the donor meets the criteria.
3. **Data Validation**:
   - If the donor is not eligible, the program will prompt for the information again.
   - If the donor is eligible, their data is stored in a list.
4. **Repeat**:
   - The program continues to collect data until the user chooses to stop.
5. **Display**:
   - After all registrations are completed, the list of donors is displayed.

Slide 7: Sample Output

1. Donor Registration Process

yaml
Copy code
```
Blood Donor Registration
Enter your name: John Doe
```

```
Enter your age: 25
Enter your phone number: 1234567890
Enter your address: 123 Main St, Cityville
Are you in good health? (Yes/No): Yes
Enter the date of your last blood donation (YYYY-MM-DD) or 'N/A' if not
applicable: 2023-07-15
Donor data saved successfully!
Do you want to register another donor? (Yes/No): Yes
```

2. Display Registered Donors

yaml
Copy code

```
List of all registered blood donors:
Name: John Doe, Age: 25, Phone: 1234567890, Address: 123 Main St, Cityville,
Last Donation: 2023-07-15
```

Slide 8: Code Execution Flow

- **Step 1**: Collect donor data (name, age, phone, etc.).
- **Step 2**: Validate eligibility based on age, health status, and last donation date.
- **Step 3**: If eligible, store donor data; if not, prompt for correction.
- **Step 4**: Repeat process for additional donors.
- **Step 5**: After all registrations, display the list of donors.

Slide 9: Future Enhancements

1. **Data Persistence**:
   - Store donor data in a database or file for permanent storage.
2. **GUI**:
   - Develop a graphical user interface (GUI) using `Tkinter` for better user interaction.
3. **Notification System**:
   - Add functionality to send email or SMS reminders for donors about upcoming donation opportunities.
4. **Admin Features**:
   - Provide admin access to view, modify, or delete donor data.
5. **Mobile Application**:
   - Develop a mobile version of the system for wider accessibility.

Slide 10: Conclusion

- **Summary**:
    - The Blood Donor Registration System is a simple, interactive way to register eligible blood donors, validate their eligibility, and store their information.
    - The system ensures that only eligible donors are allowed to donate, improving the safety and reliability of blood donation processes.
- **Future Work**:
    - Adding more advanced features such as data storage, notifications, and mobile support.

Thank You
