



Uttara University

Excellence in Higher Education and Research

Project Report

Subject Name: Object Oriented Programming.

Subject Code: CSE0613202

Submitted By:

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Submitted To:

Name : Nahrin Jannat

Designation: Lecturer at Uttara University

Project Name: NGO Platform Management System.

Objective : The main objective of this project is to design and develop a console-based NGO Fund Management System using C# and Object-Oriented Programming (OOP) principles, which allows users to donate to different social welfare funds and enables administrators to manage fund information securely.

Review & Limitations:

- 1) Managing Multiple Classes and Relationships .
- 2) Sharing Collected Money Across Classes.
- 3) Operator Overloading Implementation.
- 4) Handling Nested Menu Logic.
- 5) The most difficult aspect of this project was extending the system with fund tracking.

Members Part & Features used:

Al-Amin (2243081166)

Created 1 class for Admins Access, 2 Interface and 1 Abstract class to inherit interfaces methods operations and declare abstract method.

Features Used:

Class -- Admin

Private Variables-- 1)username , 2)password

Public Variables-- 1)TotalRequiredMoney , 2) TotalCollectedMoney.

Constructor-- 1) public Admin().

Methods-- 1) get & set methods, 2) Login() , 3)AdminMenu().

Interface-- 1) display , 2)donate.

Virtual Methods-- 1) Display() , 2) Donate().

Abstract Class-- 1) BaseCategory.

Constructor-- 1) public BaseCategory()

Abstract Method-- 1)SpecialFeature().

Abidul Islam Khan (2243081179)

Created 1 Derived class , 1 static class for getting same Donation information for everyone and 1 Base Class for Subcategory classes to inherit.

Features Used:

Derived Class -- FundCategory.

Constructor-- 1) public FundCategory().

Operator Overloading-- 1) Sum Operator.

Override Method-- 1) SpecialFeatures().

Void Method-- 1) CategoryMenu().

Static Class-- 1) Donation class

Static Method-- 1) MakeDonation().

User Input-- Donating Information by user.

Class -- 1) FundGroup.

Constructor-- 1)public FundGroup()

Virtual Method-- 1)LoadDefaultCategories()

Void Method-- 1) Menu()

Object Created-- Topic1- Topic5.

Loop-- 1) while loop.

Conditional Statements-- 1) if , else.

Fahim Furqan (2243081169)

Created 3 Derived class For getting Subcategories options.

Features Used:

Derived Classes -- 1) DisasterReliefFund , 2) WarzoneReliefFund, 3) AnimalShelterFund.

Constructor-- 1) public DisasterReliefFund(), 2) public WarzoneReliefFund(),
3) public AnimalShelterFund(). With new argument passing by base.

Override methods-- 1) LoadDefaultCategories().

Object Created-- Topic1-Topic5.

Tanvir Ahmed (2243081177)

Created 2 Derived Classes for getting Subcategories Options.

Features Used:

Derived Classes-- 1) HealthcareSupportFund, 2) EducationSupportFund.

Constructor-- 1) public HealthCareSupportFund() , 2) public EducationSupportFund().
With new argument passing by base.

Override Methods-- 1) LoadDefaultCategories().

Object Created -- Topic1- Topic5.

Taspriya Sultana (2243081046)

Created the main class to control the entire code flow.

Features Used:

Class-- Main class.

Object Created-- 1) Admin , 2) Disaster, 3) Warzone ,
4) Animal, 5) Health & 6) Edu.

Loop-- 1) While Loop.

Conditional Statements-- 1) Nested If, else.

Output:

```
NGO FUND PLATFORM
1. Disaster Relief Fund
2. Warzone Relief Fund
3. Animal Shelter Fund
4. Healthcare Support Fund
5. Education Support Fund
6. Admin Login
0. Exit
Choose: 4
```

- Choosing 4th option as Fund Option

```
Healthcare Support Fund
1. Vaccines
2. Hospital Tools
3. Free Checkup Camps
4. Health Awareness
5. Patient Help
0. Back
Choose: 3
```

- Choosing 3rd option as Sub Category

```
Free Checkup Camps
1. Donate
0. Back
Choose: 1
```

- Choosing 1 to Donate.

```
Donation for Free Checkup Camps
Your Name: Taspriya Sultana
Email ID: taspriya11@gmail.com
Country: Bangladesh

Choose ID Type:
1. Passport
2. NID
Select (1/2): 2
Enter Payment Method: Mobile Banking
NGO's Payment Number: 01293734445
Donation Amount: 2000

Thank you for Donating.
Donate again? (y/n): n
```

- Giving Donating Information by giving n leaving donate option.

Admin's Options:

```
NGO FUND PLATFORM
1. Disaster Relief Fund
2. Warzone Relief Fund
3. Animal Shelter Fund
4. Healthcare Support Fund
5. Education Support Fund
6. Admin Login
0. Exit
Choose: 6
```

```
Admin Username: admin
Admin Password: 1234
Admin Login Successful!
```

- Giving Admins Informations and login in for any updates or changes.

```
Select Fund (1-5): 4

--- ADMIN PANEL (Healthcare Support Fund) ---
1. Change Fund Name
2. Change Category Name
3. Change Required Money
4. View Fund Money Status
0. Logout
```

- Can choose any other options for more updates in site. By choosing Logout option can comeback to home page .

Discussion:

- 1) The NGO Fund Management System is developed as a console-based application to demonstrate the practical implementation of Object-Oriented Programming concepts using C#.
- 2) The use of abstraction, inheritance, polymorphism, encapsulation, and operator overloading makes the system modular, reusable, and easy to extend.
- 3) In future it can be Updated and also can add graphical interfaces.