



Project Report

Subject Name: Object Oriented Programming.

Subject Code: CSE0613202

Submitted By:

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Submitted To:

Name : Nahrin Jannat

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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 --	A class name as Admin for managements accesses.
Private Variables--	Two Private variable as username & password inside the Admin class.
Public Variables--	Two Public variable as TotalRequiredMoney & TotalCollectedMoney.
Constructor--	A constructor as public Admin() inside Admin class.
Methods--	One get & set methods & two void method as Login() & AdminMenu().
Interface--	Two interface one is display & other one is donate.
Virtual Methods--	Two Virtual Method as Display() & Donate() inside each interface without any operation.
Abstract Class--	One Abstract class as BaseCategory.
Constructor--	One Constructor inside Abstract class as public BaseCategory().
Abstract Method--	One abstract method inside Abstract class as 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 --	One Derived class name as FundCategory . Which is inherited from BaseCategory class.
Constructor--	One Constructor inside FundCategory class as public FundCategory().
Operator Overloading--	To add two fund Category together used a Sum Operator.
Override Method--	Done operation of previous declared abstract method by override As SpecialFeatures().
Void Method--	Used one void method as CategoryMenu().
Static Class--	Created one Static class for donating features as Donation class.
Static Method--	Used one static method as MakeDonation() inside that static class.
User Input--	Taking Donating Information by user.
Class --	Created another class as named by FundGroup .
Constructor--	One Constructor as name as public FundGroup() inside the FundGroup class.
Virtual Method--	Used one Virtual method as LoadDefaultCategories() to override in next derived classes.
Void Method--	Used one void Menu() inside FundGroup class.
Object Created--	Created 5 objects as Topic1- Topic5.
Loop--	Used while loop to make some Condition.
Conditional Statements--	By if , else condition implement the conditions.

Fahim Furqan (2243081169)

Created 3 Derived class For getting Subcategories options.

Features Used:

- Derived Classes --** Created 3 Derived class as 1)DisasterReliefFund , 2)WarzoneReliefFund, & 3) AnimalShelterFund which are inherited from FundGroup class.
- Constructor--** Used one Constructor each for every class as public
1)DisasterReliefFund() , 2) public WarzoneReliefFund(),
3) public AnimalShelterFund(). With new arugment passing by base.
- Override methods--** Override the previous Virtual method as LoadDefaultCategories().
- Object Created--** Given new Topic Name by created Objects of Topic1-Topic5.

Tanvir Ahmed (2243081177)

Created 2 Derived Classes for getting Subcategories Options.

Features Used:

- Derived Classes--** Created two derived class as the name of 1) HealthcareSupportFund & 2) EducationSupportFund which are inherited from FundGroup Class.
- Constructor--** Used One Constructor in Each class by name of their class as
1) public HealthCareSupportFund() , 2) public EducationSupportFund().
With new argument passing by base.
- Override Methods--** Override the previous Virtual method as LoadDefaultCategories().
- Object Created --** To give new name of Topic1- Topic5 created 5 objects

Taspriya Sultana (2243081046)

Created the main class to control the entire code flow.

Features Used:

- Class--** Created Main class as Class Program.
- Object Created--** Creates Objects of every classes as 1) Admin , 2) Disaster, 3) Warzone 4) Animal, 5) Health & 6) Edu.
- Loop--** To make Conditional Flow used a While Loop.
- Conditional Statements--** To make Conditional implementation used 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.