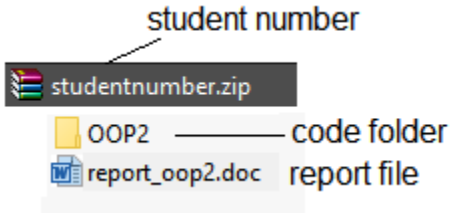
Programming Assignment 2

Employee Management Application

Instructions:

1. Write an application to implement "**Employee management**" as described below.
2. The solution is to be presented in a **report**. This report is to contain
   - A through description of the application,
   - Classes Diagram,
   - A description of underlying data structures used to solve the problem,
   - A copy of the C++ code,
   - A description of all the function/routines which have been used, and
   - Test data used and sample execution screenshots of output produced.
3. A copy of the code and an executable is to be placed in a folder called **OOP2**. A copy of the code must also be uploaded on teams with the following structure.



4. You will be required to demo your application for assessment after the due date.
5. **Due Date (Over Teams)**: 1th April 2022 @11:59PM (**By Handed**) in the lab of 6th week from 26th to 31th March 2022.

Components:

1: The Staff

The staff class will store the list of employees with the ability to add/edit and delete employees. There is a count value that returns the number of employees. Also there is a search function to look up on any data and return the matched users if found. A show all function returns all users in suitable format. The callPayroll function should return the total amount of payment for all employees in the list.

2: The Staff Member/Department

The staff member class is the base class and has the following attributes: id, name, phone, email. The staff should include a print to print staff information and pay function to calculate the payroll. The staff member belongs to a department. The department class contains the id, and department name.

3: The Employee

The employee class is a staff member with the social security number and print function.

4: The Volunteer

The volunteer class is a staff member with an amount of value.

5: The Hourly/Salaried/Commission and Executive Employee

The Hourly/Salaried/Commission and Executive class is an Employee with different attributes and a new equation for payroll function. The following table shows the payroll equation. The print function should customize the output based on employee type.

Class	Calculate Payroll
Hourly Employee	rate*hours
Salary Employee	salary
Executive Employee	salary+bonus
Commission Employee	5% * target

6: Project

The project class contains the following attributes: id. Location, currentCost, and manager. The manager is an employee. The project is composed of a list of budgets and we can calculate the total budget. The print function should print project details with a list of all budgets.

7: Budget

The budget class contains the attribute value, id of budget and the increaseBudget function to increase the budget value.

8: Demo

The main function should follow the following ***minimum*** menu:

1. **Department**
    1. Add New Department
        -> Enter department details: .....
    2. Print All Department
2. **Staff**
    1. Add New Members
        -> Enter member details: .....
        -> Enter member type: .....
        -> Enter department id: ...
    2. Print All Members
    3. Calculate Payroll
    4. Delete Member:
        -> Enter member id: .....
3. **Project**
    1. Add New Project
        -> Enter project details: .....
        -> Enter manager :.....
    2. Print All Projects
    3. Add Budget to Existing Project
        -> Project Id: .....
        -> Budget Value: .....
    4. Increase Budget to Existing Project
        -> Project Id: .....
        -> Budget Id: .....
        -> Budget adds value: ....

NOTE:

Add all requirement functions you may need such as get/set or other.

Starter Class Diagram