**Introduction**

The HR system is a software application that aims to automate the management of employee records, benefits, and payroll. The main objective of it is to provide an efficient and user-friendly way for HR personnel to manage employee data, benefits, and compensation.

**The classes**

1. Benefits (abstract class): This base class is to determine different types of benefits for employees. Mainly two types of benefits -> health benefit & dental benefit

Benefit

# m\_plantype : string

# m\_amount : double

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+ getInfo() : string

+ getDetails() : void

+ displayBenefit() : void

+ caculateBenefit() : double

DentalBenefit

- info : string

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+ getInfo() : string

+ getDetails() : void

+ displayBenefit() : void

+ caculateBenefit() : double

HealthBenefit

- info : string

- coverage : string

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+ getInfo() : string

+ getDetails() : void

+ displayBenefit() : void

+ caculateBenefit() : double

1. Department class: This class stores information about a department, including the department name, ID. Each employee should belong to the department

Depatrment

- m\_department : string

- m\_id : int

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+ readDepartment( i : int , s : string ) : void

+ printDepartment() : void

1. Employee class: This base class stores the basic information of an employee, including their name, ID, job title, phone, email, and a list of benefits. There are four types of employees. The Hourly, Salaried, Commission and Manager is an Employee with different attributes and a new equation for payroll function.

Employee

- \*benefitList : Benefit

- benefitCount : int

- benefitSize : int

# employee\_id : int

# employee\_name : string

# employee\_phone : string

# employee\_email : string

# jobTitle : string

# totalBene : double

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+ setColor(color : int ) : void

+ storeBenefitList() : void

+ getBenefitList() : void

+deleteBenbfit( s : string ) : bool

+ editBenefit( s : string ) : bool

+ getEmployeeID() : int

+ dispalyDetails() : void

+ getEmployeeDetails() : void

+ getSalary() : double

+ caculatePay() : double

CommissionEmployee

- target : double

- rate : double

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+ getEmployeeDetails() : void

+ dispalyDetails() : void

+ caculatePay() : double

+ getSalary() : double

SalariedEmployee

+ salary:double

+ getSalary():double

+ getEmployeeDetails():void

+ dispalyDetails():void

+ caculatePay():double

ManagerEmployee

-bouns:double

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

+getSalary();double

+getEmployeeDetails():void

+dispalyDetails():void

+caculatePay():double

HourlyEmployee

- hoursWorked : double

- rate : double

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+ addMoreHours(int hours) : void

+ getEmployeeDetails() : void

+ dispalyDetails(): void

+ getSalary() : double

+ caculatePay() : double

1. HR System: This class is the main class that stores a list of employees and manages the operations of adding, removing, and searching for departments and employees. It also has a method to display information about a specific employee or the average salary of a department.

HRSystem

- EmployeeSize:int

- EmployeeCount:int

- \*EmployeeList :Employee

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+ setColor(int color) :void

+ addEmployee():void

+ employeeSearch():void

+ deleteEmployee():void

+ editEmployee():void

+ addBPackage():void

+ deleteBPackage():void

+ editBPackage():void

+ salaryCaculation():void

+ displayAll():void

+ addDepart(int):void

The class diagram

Benefit

# m\_plantype : string

# m\_amount : double

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

+ getInfo() : string

+ getDetails() : void

+ displayBenefit() : void

+ caculateBenefit() : double

DentalBenefit

- info : string

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

+ getInfo() : string

+ getDetails() : void

+ displayBenefit() : void

+ caculateBenefit() : double

HealthBenefit

- info : string

- coverage : string

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+ getInfo() : string

+ getDetails() : void

+ displayBenefit() : void

+ caculateBenefit() : double

Depatrment

- m\_department : string

- m\_id : int

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+ readDepartment( i : int , s : string ) : void

+ printDepartment() : void

Employee

- \*benefitList : Benefit

- benefitCount : int

- benefitSize : int

# employee\_id : int

# employee\_name : string

# employee\_phone : string

# employee\_email : string

# jobTitle : string

# totalBene : double

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

+ setColor(color : int ) : void

+ storeBenefitList() : void

+ getBenefitList() : void

+deleteBenbfit( s : string ) : bool

+ editBenefit( s : string ) : bool

+ getEmployeeID() : int

+ dispalyDetails() : void

+ getEmployeeDetails() : void

+ getSalary() : double

+ caculatePay() : double

CommissionEmployee

- target : double

- rate : double

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

+ getEmployeeDetails() : void

+ dispalyDetails() : void

+ caculatePay() : double

+ getSalary() : double

SalariedEmployee

+ salary:double

+ getSalary():double

+ getEmployeeDetails():void

+ dispalyDetails():void

+ caculatePay():double

ManagerEmployee

-bouns:double

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

+getSalary();double

+getEmployeeDetails():void

+dispalyDetails():void

+caculatePay():double

HourlyEmployee

- hoursWorked : double

- rate : double

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

+ addMoreHours(int hours) : void

+ getEmployeeDetails() : void

+ dispalyDetails(): void

+ getSalary() : double

+ caculatePay() : double

HRSystem

- EmployeeSize:int

- EmployeeCount:int

- \*EmployeeList :Employee

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

+ setColor(int color) :void

+ addEmployee():void

+ employeeSearch():void

+ deleteEmployee():void

+ editEmployee():void

+ addBPackage():void

+ deleteBPackage():void

+ editBPackage():void

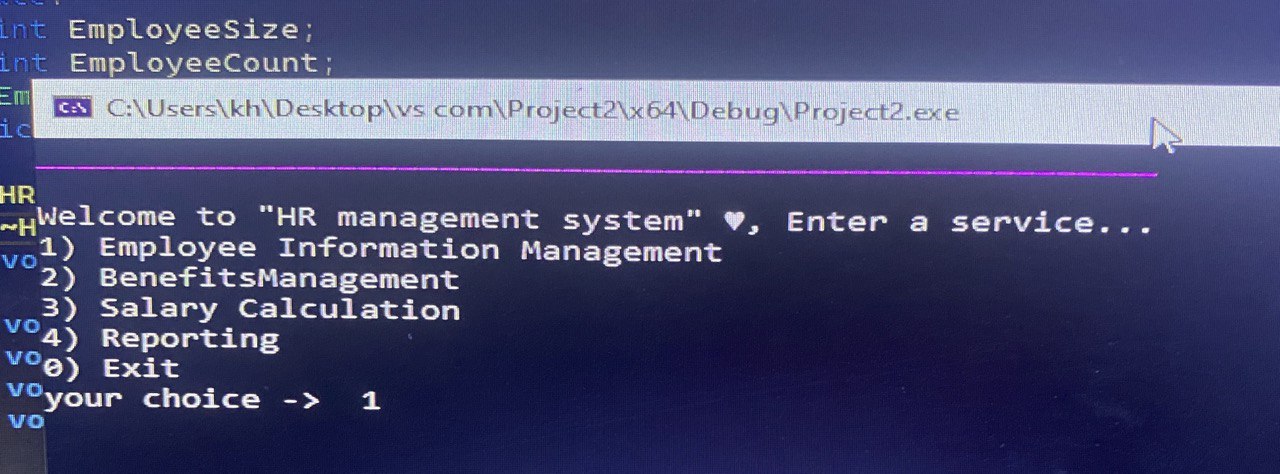
+ salaryCaculation():void

+ displayAll():void

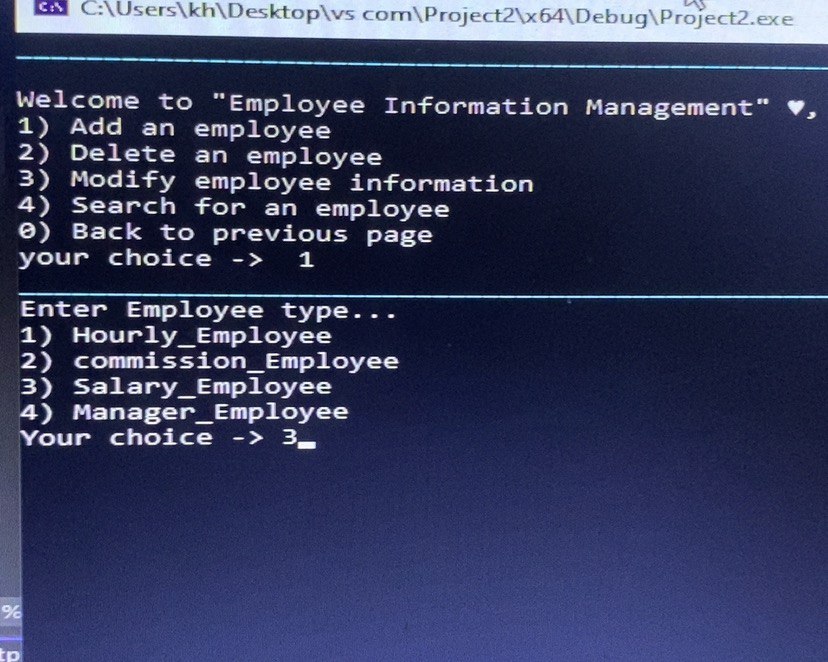
+ addDepart(int):void

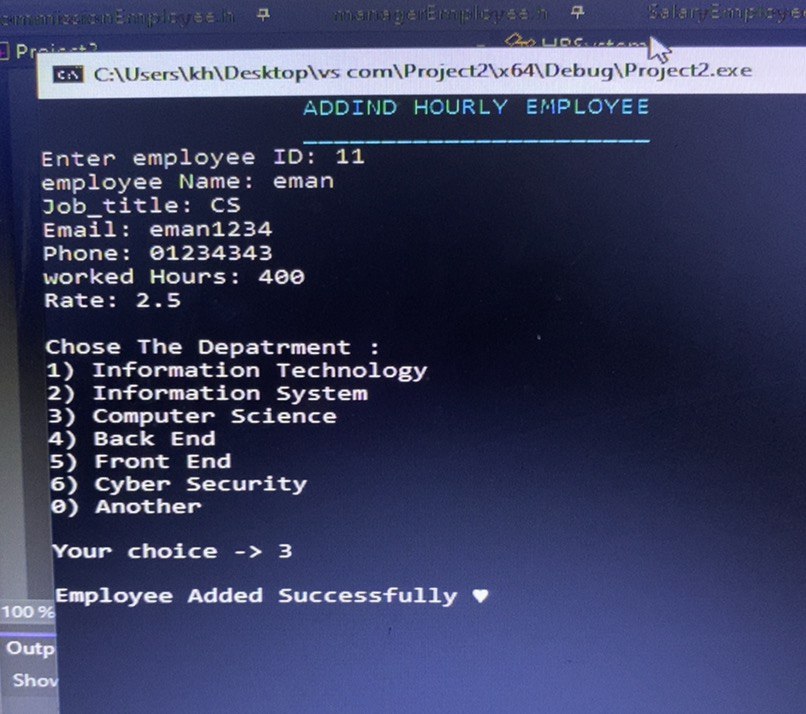
The output

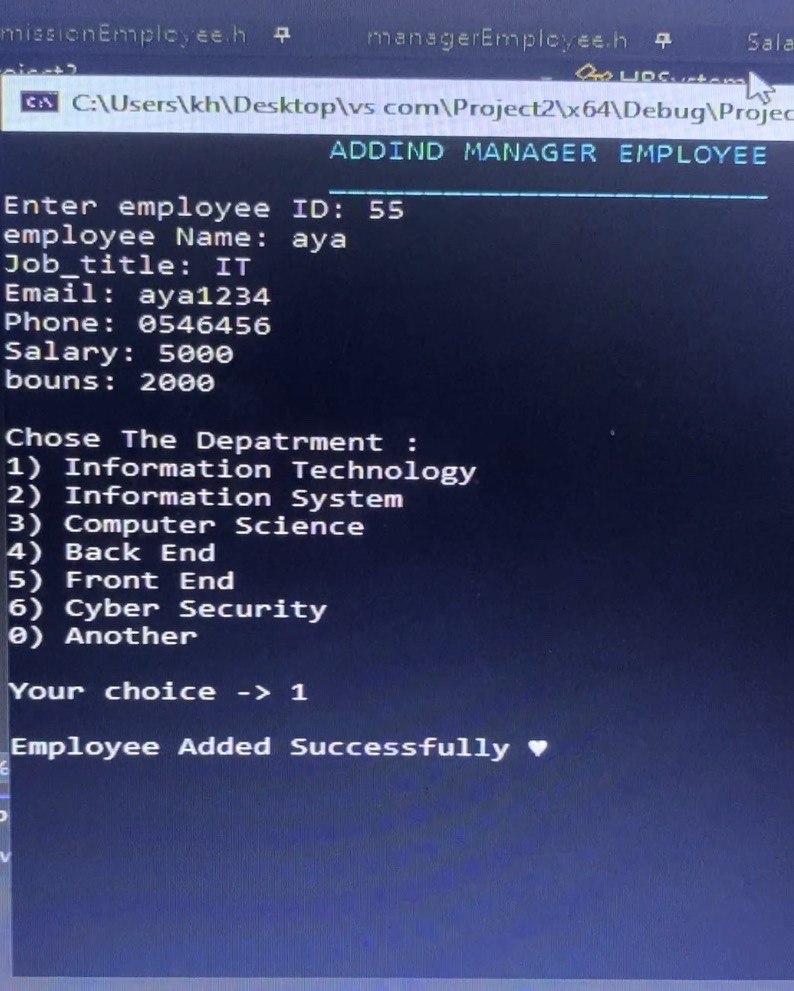
[1] Employee information management to Add, Edit, delete & search employees

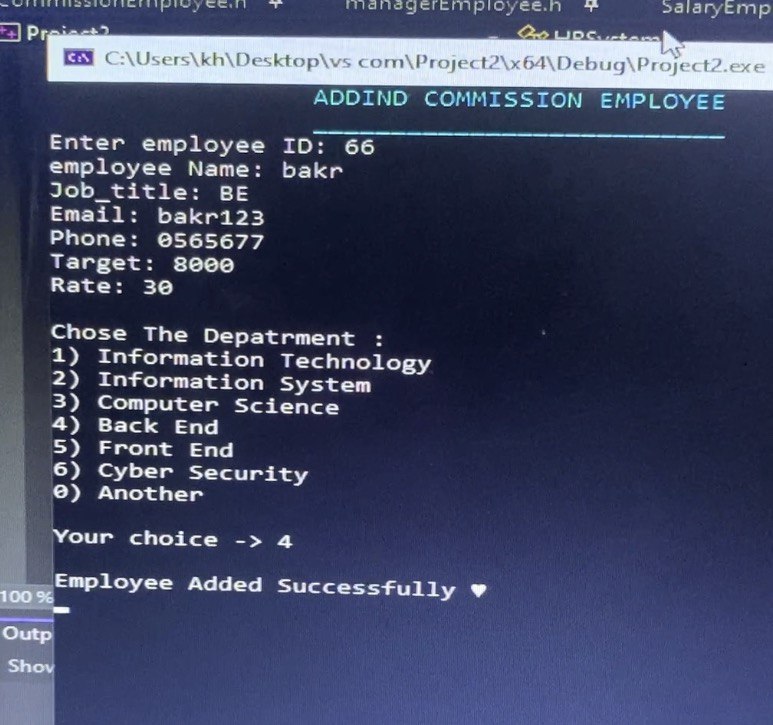


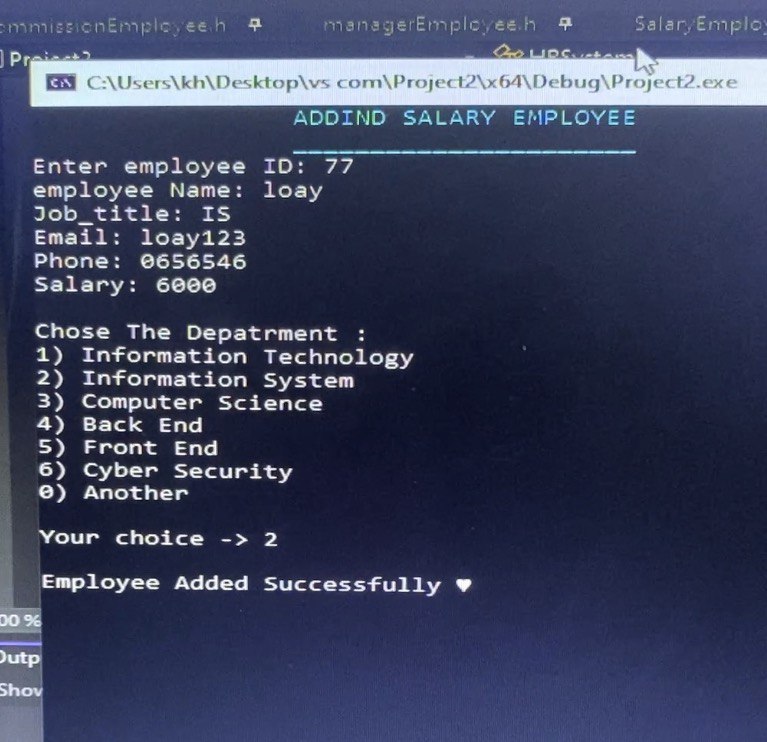
-> add (hourly, commission, salaried & manager) employees



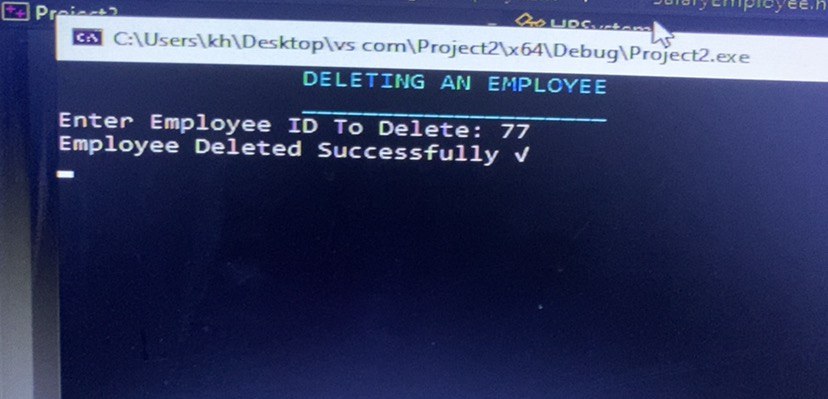




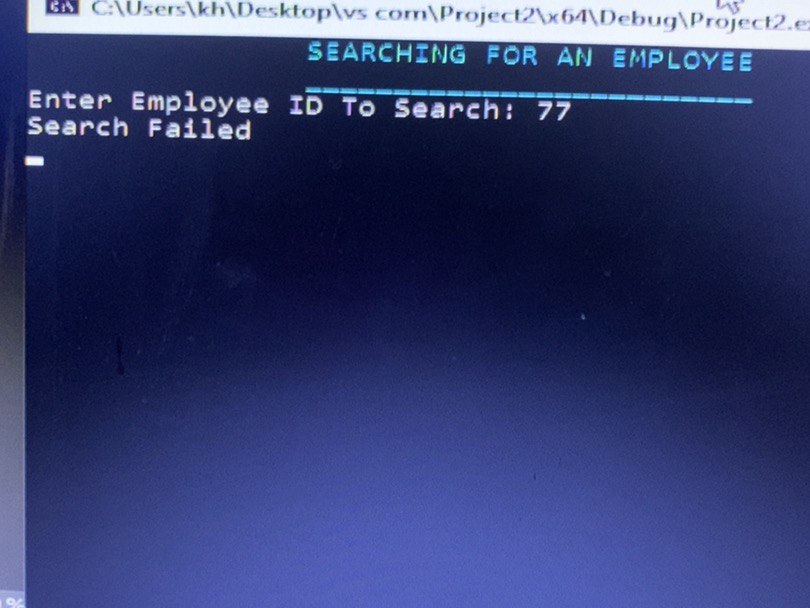




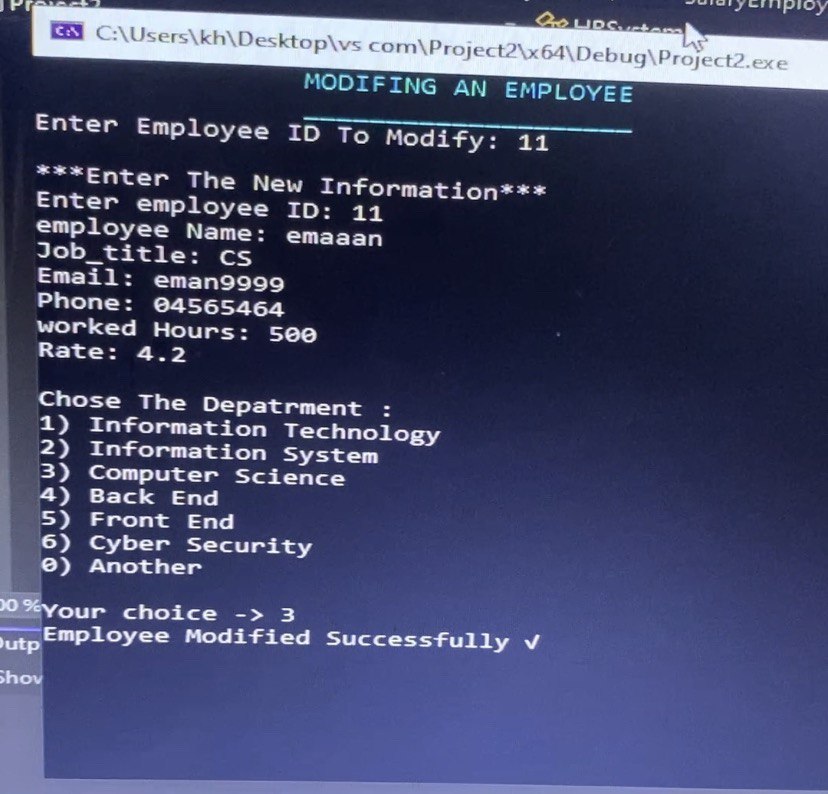
-> Delete an employee



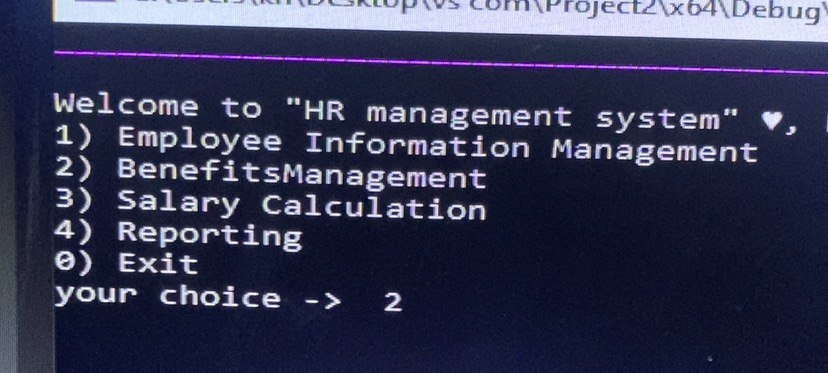
-> Search an employee



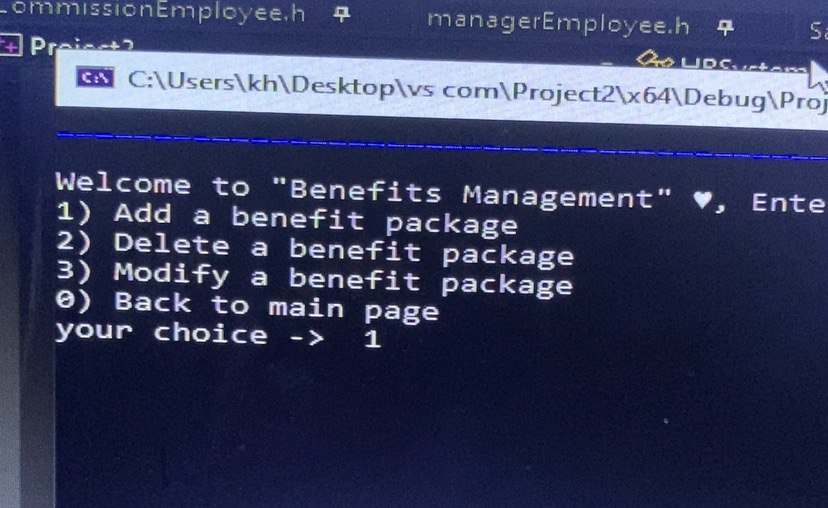
-> Edit an employee

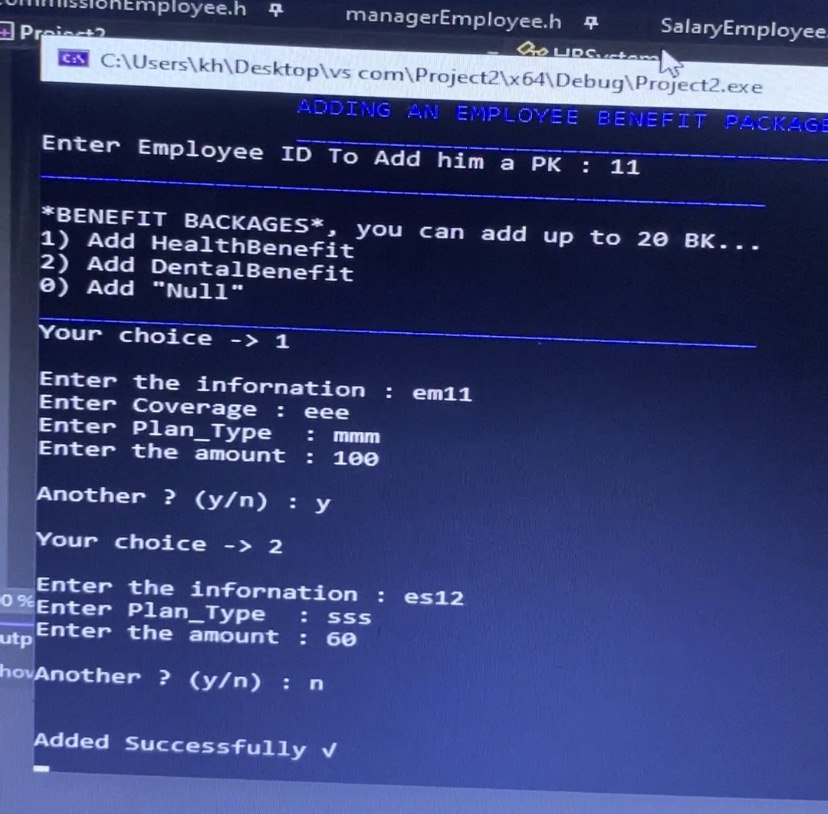


[2] Benefit Management: to add, edit & delete benefits

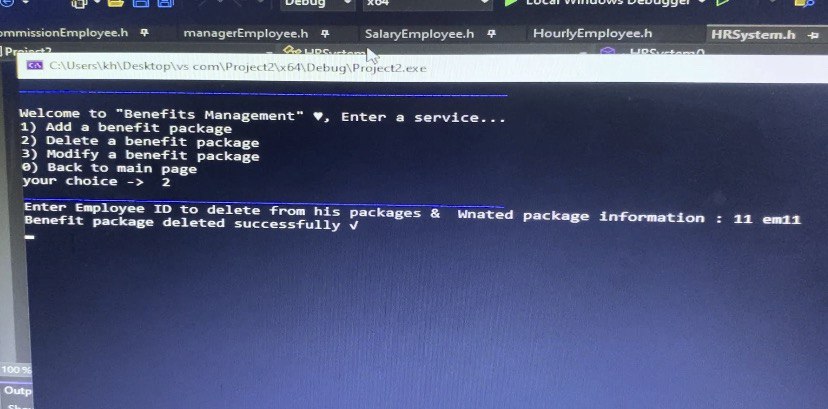


-> add

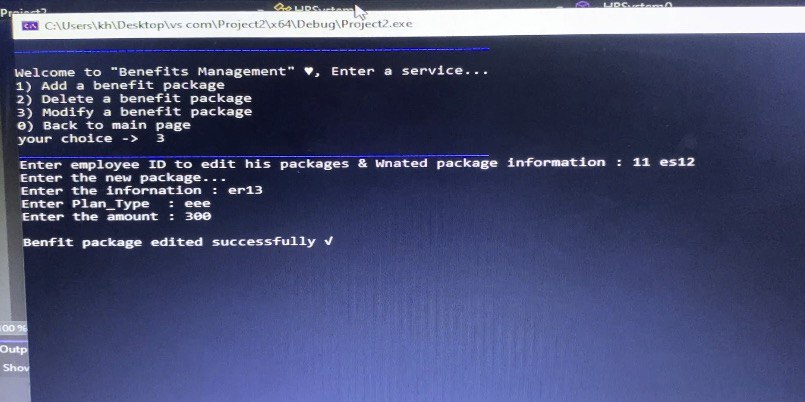




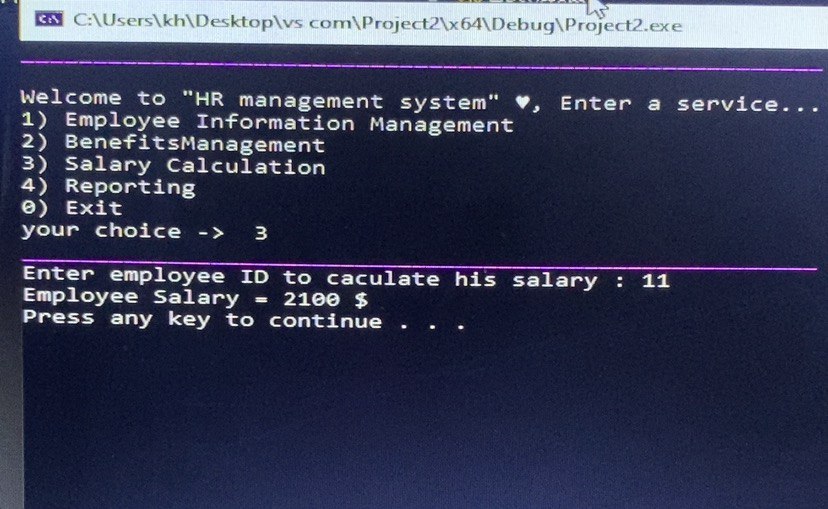
-> delete



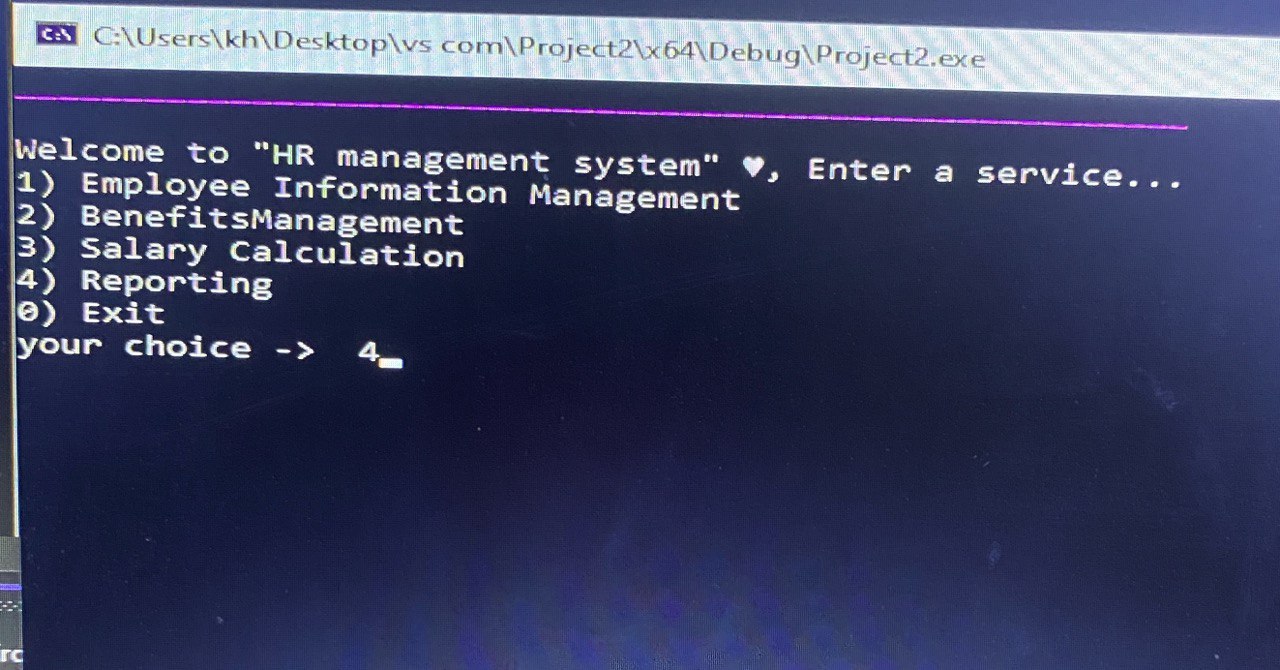
-> edit

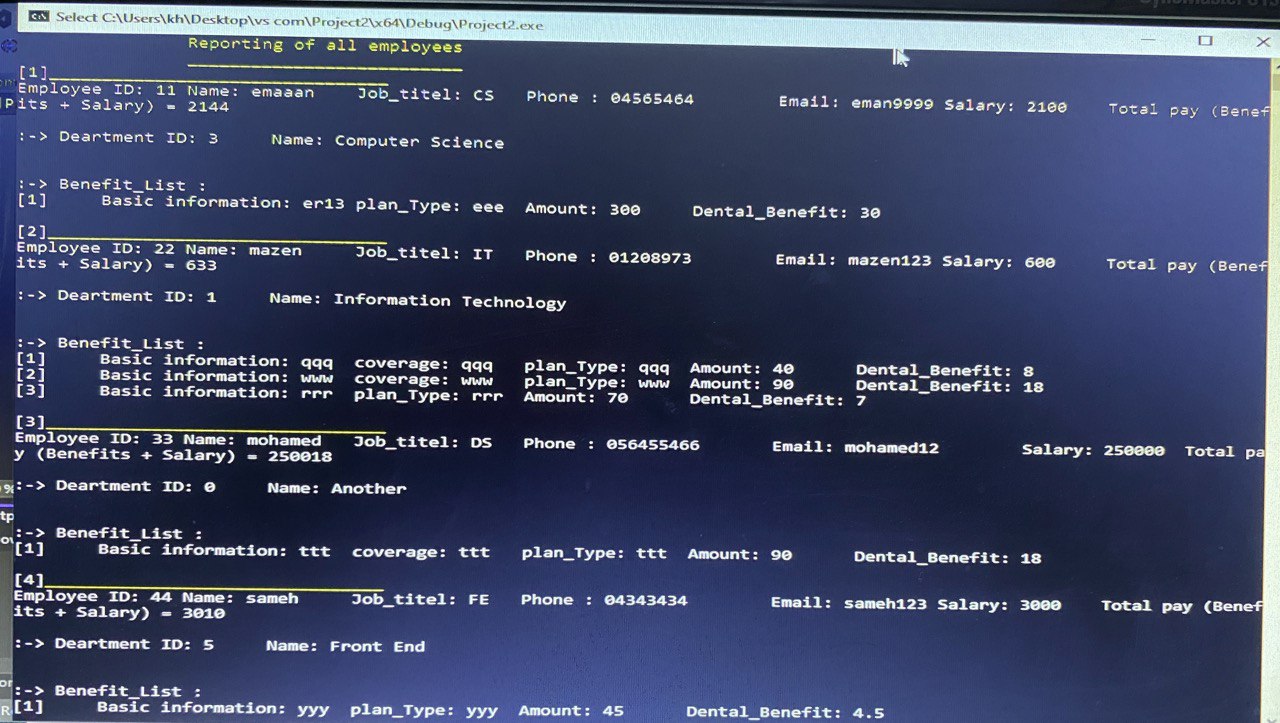


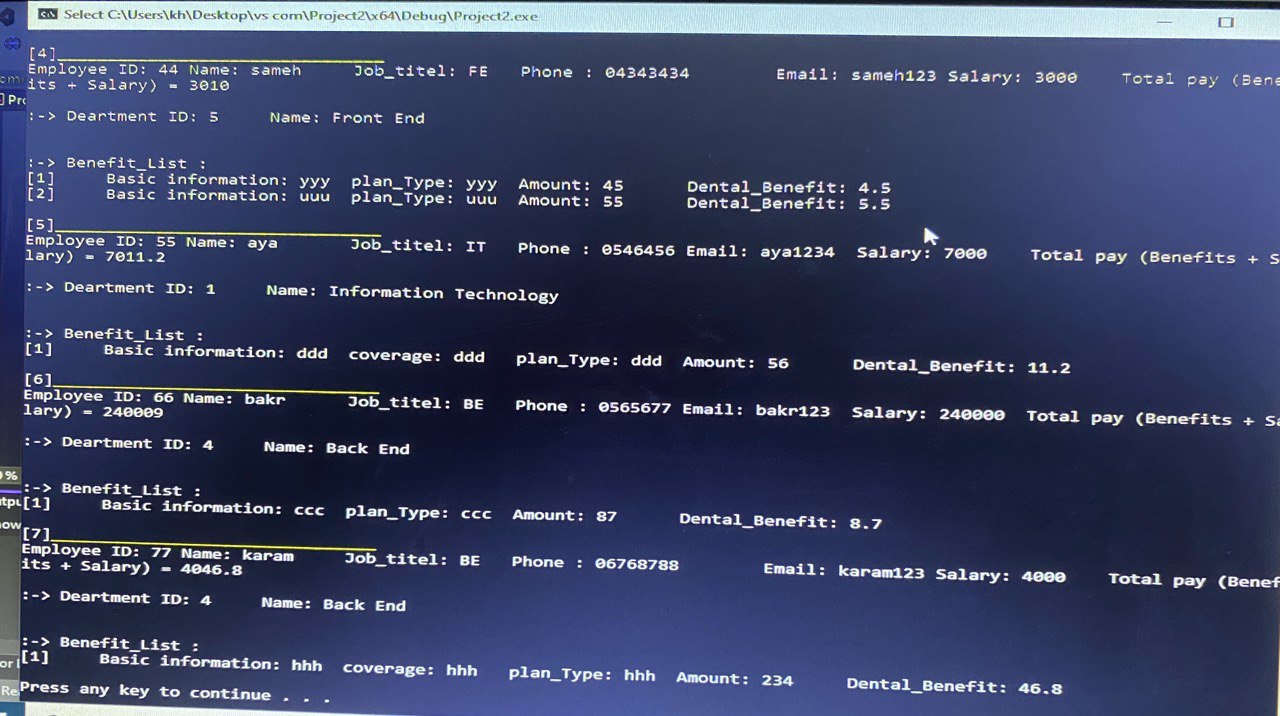
[3] Salary Calculation: to calculate wanted employee payroll



[4] Reporting: print all employees







[5] Finish