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Project Title: Salary Calculator

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Introduction:

The project given to our group is "salary calculator". I and my teammates have been working on this project since 5th of September. The project is made in c++. It mainly works using file handling and inheritance.

In this program, we used login system so that no one can access the system except the people who know the password. The passwords are stored in a text file. There is also a system present in case the user forgets his password. The user can change his password by simply clicking "forgot password" and then entering the correct pin code and writing the new password. The application takes the name, city name and cnic from the user of the required designation at the end it asks the basic salary after entering it gives the bonus and tax deducted on basic salary.

HEADER FILES:

1. #include <iostream>

This is used for taking input/output from the user.

2. #include <fstream>

This header file is used for reading and writing purpose from the text file.

3. #include <stdio.h>

This header file is used for clearing the screen.

4. #include <windows.h>

This is used for invoking sleep function.

VARIABLES:

String type variables:

ceo_name, asst_name, hr_name, clerk_name, recpt_name, prob_name; ceo_city, asst_city, hr_city, clerk_city, recpt_city, prob_city, ceo_cnic.

Float type variables:

bonus_ceo, bonus_asst, bonus_hr, bonus_clerk, bonus_recpt, bonus_prob, ceo_tax, asst_tax, hr_tax,clerk_tax,recpt_tax,prob_tax, net_sal_ceo, net_sal_asst, net_sal_hr, net_sal_clerk, net_sal_recpt,net_sal_prob.

Integer type variables:

choice, bsal ceo, bsal asst, bsal hr, bsal clerk, bsal recpt, bsal prob.

CLASSES:

We used two classes in this project:

- 1. class Desiginfo
- 2. class Salaryinfo

MEMBER FUNCTIONS:

Member functions of the classes:

- 1. void setname ()
- 2. void getname()
- 3. void setcity()
- 4. void getcity()
- 5. void setCnic()
- 6. void getCnic()
- 7. void calcsalary()

INHERITANCE:

Syntax for inheritance:

class Salaryinfo:public Desiginfo

In this class salaryinfo is derived from parent class designifo, once we did inheritance than derived class is able to access all the member functions of the parent class and now we are able to call the member functions of the parent class by creating object of the derived class in the int main().

class Salaryinfo:public Desiginfo //inheritance of the child class with the parent cl

CLASS DIAGRAM:

Salaryinfo choice:int bsal ceo:int bsal_asst:int bsal_hr:int bsal clerk:int bsal recpt:int bsal_prob:int bonus_ceo:float bonus_asst:float bonus_hr:float bonus_clerk:float bonus_recpt:float bonus_prob:float ceo_tax:float asst_tax:float hr_tax:float clerk_tax:float recpt_tax:float prob_tax:float net_sal_ceo:float net_sal_asst:float net_sal_hr:float net_sal_clerk:float net_sal_recpt:float net_sal_prob:float

Desiginfo ceo_name:string asst_name:string hr name:string clerk_name:string recpt_name:string prob_name:string ceo_city:string asst city:string hr_city:string clerk city:string recpt_city:string prob_city:string ceo_cnic:string asst_cnic:string hr cnic:string clerk_cnic:string recpt_cnic:string prob cnic:string setname():void getname():void setcity():void getcity():void setCnic():void getCnic():void

LOGIN SYSTEM:

calcsalary():void



First of all it will ask the user enter password. And the program will read the password from the password.txt from the back end of the program.

```
■ "C:\Users\HP\Desktop\final semester project by group\password.exe" — ⑤
you enter the wrong password
you have 5 chances left
enter the password :
```

If the user enters the wrong password at first then it will ask the user enter the password again and displays that you have 5 chances left.

```
□ "C\Users\HP\Desktop\final semester project by group\password.exe" — ⑤
you enter the wrong password

you have 4 chances left
enter the password : ■
```

If user enters again the wrong password then it will display you have 4 chances left. It will ask the password again and again until the chances become 1.

```
■ "C\Users\HP\Desktop\final semester project by group\password.exe" — ①
you enter the wrong password
you have 3 chances left
enter the password :
```

```
■ "C\Users\HP\Desktop\final semester project by group\password.exe" — ☐
you enter the wrong password
you have 2 chances left
enter the password : ■
```

And at last

```
☐ "C\Users\HP\Desktop\final semester project by group\password.exe"

— □
you enter the wrong password

you have 1 chances left

enter the password : 12
your system is locked for 5 seconds please wait
```

If all the chances used then it will show your system has been locked for 5 seconds.

After 5 seconds it will ask the user enter the password again.

```
T-CAUSers/HP/Desktop/final semester project by group/password.exe*

you enter the wrong password

you have 1 chances left
enter the password : 12

your system is locked for 5 seconds please wait
enter the password :
```

If user again enters the wrong password 6 times it will show.

Press 1 if you want to reset the password.

```
To Chloers HPINDesktop Minal semester project by group \project.eve*

you enter the wrong password

you have 1 chances left

enter the password : er

your system is locked for 5 seconds please wait

press 1 if you want to forget the password or press any button (except 1) to stop the program : __

enter the password : 1234

your system is locked for 5 seconds please wait

press 1 if you want to forget the password or press any button (except 1) to stop the program : 1

enter the pin code :
```

After pressing 1 it will ask the pin code. It asks enter the pin code. If user enters the wrong pin code it will display 3 chances are left.



If user again enters the wrong pin code it will display 2 chances are left.

```
■ 'C\Users\HP\Desktop\final semester project by group\password.exe' — ⑤
you have 2 chances left
enter the pin code : ■
```

If user enters the wrong pin code third time it will display system is locked permanently.

```
□ "C\Users\HP\Desktop\final semester project by group\password.exe" — □
you have 1 chances left

enter the pin code : 12333
your system is permanently locked :
Process returned 0 (0x0) execution time : 25.487 s

Press any key to continue.
```

If user enters the correct pin code it will ask the user. It will ask the user enters the new password. And said displays restart the program.

```
□ "C\Users\HP\Desktop\final semester project by group\project.exe" — □ × you enter the wrong password

you have 1 chances left

enter the password : 4

your system is locked for 5 seconds please wait

press 1 if you want to forget the password or press any button (except 1) to stop the program : 1

enter the pin code : 1234

enter the new password : 12-4-9

restart the program

Process returned 0 (0x0) execution time : 13.231 s

Press any key to continue.
```

If user enters the right password it will displays the salary calculator and ask the names for the required designation.

SALARY CALCULATOR:

```
To Colbers/Hi/Desktop/linal semester project by group/project.eve*

enter the password: 12-4-9

you have successfully login

* Salary Calculation System

* Inter the name of the CEO: All

Inter the name of the Assistant: Hamza

Inter the name of the Receptionist: Rabia

Inter the name of the Receptionist: Rabia

Inter the name of the Receptionist: Rabia

Inter the name of the Probation: Majeed
```

After entering the names of the required designation .It will asks the city of the required designation.

```
Salary Calculation System

Solary Calculation System

Enter the name of the CEO: Ali
Enter the name of the Assistant: Hamza
Enter the name of the HR: Rahat
Enter the name of the Receptionist: Rabia
Enter the name of the Receptionist: Rabia
Enter the name of the Probation: Majeed

Enter the city of the CEO: Lahore
Enter the City of the HR: Multan
Enter the City of the CEO: Karachi
Enter the City of the CEO: Karachi
Enter the City of the Receptionist: Gujjrawala
Enter the City of the Receptionist: Gujjrawala
Enter the City of the Probation: Lahore_
```

After entering the cities it will asks the cnic.

```
** Salary Calculation System

** Salary Calculation System

Enter the name of the CEO: All

Enter the name of the Assistant: Hamza

Enter the name of the RR: Rahat

Enter the name of the RR: Rahat

Enter the name of the RR: Rahat

Enter the name of the Receptionist: Rabia

Enter the name of the Probation: Majeed

Enter the name of the Probation: Majeed

Enter the City of the CEO: Labore

Enter the City of the CEO: Labore

Enter the City of the RR: Multan

Enter the City of the RR: Multan

Enter the City of the Receptionist: Gujfawala

Enter the City of the Receptionist: Sujfawala

Enter the Cnic no. of the Probation: Sujfawala

Enter the Cnic no. of the Probation: Sujfawala

Enter the Cnic no. of the Probation: Sujfawala-5

Enter the Cnic no. of the Probation: Sujfawala-6
```

It will display the detail entered by the user.

```
Name of the CEO is: Ali
Name of the Assistant is: Hamza
Name of the Mis:Rahat
Name of the Mis:Rahat
Name of the Receptionist is: Rabia
Name of the Receptionist is: Rabia
Name of the Receptionist is: Rabia
Name of the Probation is: Majeed
City of the CEO is: Lahore
City of the Assistant is: Faisalabad
City of the Assistant is: Faisalabad
City of the Ris: Nullan
City of the Receptionist is: Gujjrawala
City of the Receptionist is: Gujjrawala
City of the Probation is: Lahore
City of the Probation is: Lahore
City of the CEO is: Saisalasil7779-1
Conic no. of the CEO is: Saisalasil7779-1
Conic no. of the CEO is: Saisalasil7779-1
Conic no. of the CEO is: Saisalasil7794-2
Conic no. of the Ris: Syon-Saisalasil7794-2
Conic no. of the Clerk is: Spon-Saisalasil7794-4
Conic no. of the Clerk is: Spon-Saisalasil7794-4
Conic no. of the Clerk is: Spon-Saisalasil7794-4
Conic no. of the Clerk is: Spon-Saisalasil794-4
Conic no. of the Receptionist is: Spon-Saisalasil794-4
Conic no. of the Probation is: Spon-Saisalasil794-6
Enter the Basic Saiary of the CEO: ____
```

Then it will ask the salary of the all designation. After getting the salary of the all designation it will asks the option whose (basic salary, bonus, tax deduction) salary you want to see.

```
COURT MANAGEMENT Desire projection Co. of the Assistant: 35002-5911748-2 (inter the Cnic no. of the Assistant: 35002-5911748-2 (inter the Cnic no. of the Receptionist: 35002-6912902-4 (inter the Cnic no. of the Receptionist: 35002-6912902-4 (inter the Cnic no. of the Probation: 35002-6912902-4 (inter the Cnic no. of the Probation: 35002-6912903-5 (inter the Cnic no. of the Probation: 35002-6912903-5 (inter the Cnic no. of the Probation: 35002-6912903-6 (inter the Cnic no. of the Probation: 35002-6912903-5 (inter the Cnic no. of the Assistant is: Faisabad (inter the Cnic no. of the Cn
```

If user press the 1 it will display the salary scenario (50 % bonus and 30% tax deduction on basic salary) of the Ceo. In case user enters the basic salary more 150,000 or less than 90,000 or enters the value in negative it will displays the error message.

```
Extracted the Res State of the Res State
```

If user press the 2 it will display the salary scenario (40 % bonus and 25% tax deduction on basic salary) of the Assistant. In case user enters the basic salary more 80,000 or less than 65,000 or enters the value in negative it will displays the error message.

Basic Salary of the CEO must be greater than equal to 90k and less than equal to 150k Bonus for the CEO Designation is the 50% of the Basic pay Tax deduction for CEO Designation is the 30% of the net salary

ssic Salary of the CEO is:-3000 nable to compute bonus for this Designation nable to compute Tax Deduction for this Designation nable to compute Net Salary for this Designation

ocess exited after 42.66 seconds with return value 0 ess any key to continue . . . _

If user press the 3 it will displays the salary scenario (30 % bonus and 20% tax deduction on basic salary) of the HR. In case user enters the basic salary more 60,000 or less than 50,000 or enters the value in negative it will displays the error message.

ocess exited after 33.58 seconds with return value 0 ess any key to continue

```
Enter the Basic Salary of the Clerk: 442421
Enter the Basic Salary of the Receptionist: 41231
Enter the Basic Salary of the Probation: 1312

* 1. CED

* 2. Assistant

* 3. HR

* 4. Clerk

* 5. Receptionist

* 6. Probation

* 7. Secondary

* 8. Probation

* 9. Process any number from the choice (1-6) to calculate the net salary of the requied designation: 3

(Salary of the HR must be greater than equal to SRk and less than equal to 68k

Bonus of the HR Designation is the 28k of the Basic pay

Basic Salary of the HR is:51000
Bonus of the HR is:51000
Bonus of the HR is:51000
Bonus of the HR Salary will be: 13260
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H
```

If user press the 4 it will displays the salary scenario (25 % bonus and 15% tax deduction on basic salary) of the Clerk. In case user enters the salary more 48,000 or less than 40,000 or enters the value in negative it will displays the error message.

```
Exception the Control projectors

Inter- the Basic Salary of the Celevis 39800

Inter- the Basic Salary of the Receptionist; $53522

Inter- the Basic Salary of the Celevis and by the Receptionist (Inter- the Salary Salary
```

If user press the 5 it will displays the salary scenario (20 % bonus and 10% tax deduction on basic salary) of the Receptionist. In case user enters the basic salary more 48,000 or less than 40,000 or enters the value in negative it will displays the error message.

```
Extre the Basic Salary of the Clerk: 45666

Extre the Basic Salary of the Clerk: 45666

Extre the Basic Salary of the Probation: 3398

Extre the Basic Salary of the Receptionist in the Basic Salary of the required designation: 5

Extre the Basic Salary of the Receptionist in Salary of the Receptionis
```

If user press the 6 it will displays the salary scenario (5 % bonus and 7% tax deduction on basic salary) of the Probation. In case user enters the salary more 20,000 or less than 25,000 or enters the value in negative it will displays the error message.

```
Enter the Basic Salary of the Clerk: 35353

Enter the Basic Salary of the Receptionist: 5353

Enter the Basic Salary of the Probation: 66000

1. CEO
2. Assistant
3. IRR
4. Clerk
5. Receptionist
6. Probation

Press any number from the choice (1-6) to calculate the net salary of the requied designation: 6

Basic Salary of the Probation must be greater than equal to 20k and less than equal to 25k
Boous for the Probation is the 07% of the net salary

Assistant

Assistant

Basic Salary of the Probation is the 07% of the net salary

Compute Tax Beduction for Probation is the 87% of the net salary

Assistant

Basic Salary of the Probation is Sic6000

Unable to compute Bonus because Basic Salary out of range
Unable to compute Bonus because Basic Salary out of range
Unable to compute No Esalary because Basic Salary out of range
Unable to compute No Esalary because Basic Salary out of range
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Unable to compute No Esalary because Basic Salary out of range
```