```
//Mickie Blair
//Java I – CIST 2371
//Final Project - Person Class
//superclass

package FinalProjectPeople;

import javax.swing.JOptionPane;

public class Person
{
   private String firstName;      //first name
   private String lastName;       //last name
   private String streetAddress;   //street address
   private int zipCode;           //zip code
   private String phoneNumber;     //phone number

   //set person data
   public void setPersonData()
   {
      firstName = JOptionPane.showInputDialog("Enter the First Name:");

      lastName = JOptionPane.showInputDialog("Enter the Last Name:");

      streetAddress = JOptionPane.showInputDialog("Enter the Street Address:");

      String input= JOptionPane.showInputDialog("Enter the ZipCode:");
      zipCode = Integer.parseInt(input);

      phoneNumber= JOptionPane.showInputDialog("Enter the Phone Number:");
   }

   //display results on a single line
   public void displayPersonData()
   {
      String fullName = firstName + " " + lastName;
      System.out.printf("\n%-20s", fullName);
      System.out.printf("%-25s", streetAddress);
      System.out.printf("%-12d", zipCode);
      System.out.printf("%-15s", phoneNumber);
   }
}



//Mickie Blair
//Java I – CIST 2371
//Final Project - College Employee Class
//extends from person(subclass)

package FinalProjectPeople;

import javax.swing.JOptionPane;

public class CollegeEmployee extends Person
{
```

```
   private String socialSecurityNumber;        //social security number
   private double annualSalary;                 //annual salary
   private String deptName;                     //department name
   private static int empCount = 0;             //count of college Employees

   //set college employee data with a method to override Person Class method
   @Override
   public void setPersonData()
   {
      super.setPersonData();

      socialSecurityNumber = JOptionPane.showInputDialog("Enter the "
                  + "Employees's Social Security Number");

      String input= JOptionPane.showInputDialog("Enter the Employees's Annual"
            + " Salary:");
      annualSalary = Double.parseDouble(input);

      deptName = JOptionPane.showInputDialog("Enter the Employee's Department"
                  + " Name");

      empCount++;
   }

   /**
    *
    * @return Employee Count
    */
   public int getEmpCount()
   {
      return empCount;
   }

   //display results with a method to override Person Class method
   @Override
   public void displayPersonData()
   {
      super.displayPersonData();

      System.out.printf("%-15s", socialSecurityNumber);
      System.out.printf("$ %-15.2f", annualSalary);
      System.out.printf("%-15s", deptName);
   }
}
```

```
//Mickie Blair
//Java I – CIST 2371
//Final Project - Faculty Class
//extends from CollegeEmployee (subclass)

package FinalProjectPeople;

import javax.swing.JOptionPane;
```

```
public class Faculty extends CollegeEmployee
{
   private boolean tenured;       //boolean for tenure state (true = Yes)
   private static int fCount;      //count of faculty

   //set faculty data with a method to override Person Class/College Employee method
   @Override
   public void setPersonData()
   {
      super.setPersonData();
      String input = JOptionPane.showInputDialog("Is the Faculty member tenured?"
                     + "(Enter Y or N)");

      input = input.toUpperCase();

      while (!input.equals("Y") && !input.equals("N"))
      {


         input = JOptionPane.showInputDialog("Invalid Response. Try Again.\n"
               + "Is the Faculty member tenured?"
                     + "(Enter Y or N)");

         input = input.toUpperCase();
      }

      if (input.equals("Y"))
         {
            tenured = true;
         }

         if (input.equals("N"))
         {
            tenured = false;
         }
      fCount++;
   }

   /**
    *
    * @return Faculty Count
    */
   public int getFCount()
   {
      return fCount;
   }

   //display results with a method to override Person Class/College Employee method
   @Override
   public void displayPersonData()
   {
      super.displayPersonData();

      if (tenured)
            {
               System.out.printf("%-10s", "YES");
            }
```

```
      else
            {
               System.out.printf("%-10s", "NO");
            }
   }
}
```

```
//Mickie Blair
//Java I – CIST 2371
//Final Project - Student Class
//extends from person (subclass)

package FinalProjectPeople;

import javax.swing.JOptionPane;

public class Student extends Person
{
   private String major;      //students major
   private double gpa;        //students GPA
   private static int sCount;   //count of students

   //set person data with a method to override Person Class method
   @Override
   public void setPersonData()
   {
      super.setPersonData();

      major = JOptionPane.showInputDialog("Enter the Student's Major:");

      String input= JOptionPane.showInputDialog("Enter the Student's GPA:");
      gpa = Double.parseDouble(input);

      sCount++;
   }

    /**
    *
    * @return Student Count
    */
   public int getSCount()
   {
      return sCount;
   }

    //display results with a method to override Person Class method
   @Override
   public void displayPersonData()
   {
      super.displayPersonData();

      System.out.printf("%-15s", major);
      System.out.printf("%-10.2f", gpa);
    }
```

```
}


//Mickie Blair
//Java I – CIST 2371
//Final Project - College List Class

package FinalProjectPeople;

import javax.swing.JOptionPane;

public class CollegeList
{
   public static void main(String []args)
   {
      String menuChoice ="";         //to hold user choice
      final int NUM_EMPLOYEES = 4;    //constant for number of college Employees
      final int NUM_FACULTY = 3;    //constant for number of college Employees
      final int NUM_STUDENTS = 7;    //constant for number of college Employees
      int employeeCounter = 0;          //college employee counter
      int facultyCounter = 0;           //faculty counter
      int studentCounter = 0;           //student counter

      //Declare an array of four regular College employees
      CollegeEmployee[] collegeEmployeeArray = new CollegeEmployee[NUM_EMPLOYEES];

      //Declare an array of three faculty
      Faculty[] facultyArray = new Faculty[NUM_FACULTY];

      //Declare an array of seven students
      Student[] studentArray = new Student[NUM_STUDENTS];

      //loop to ask the user which type of person they would like to enter
      while (!menuChoice.equalsIgnoreCase("Q"))
      {
         String input = JOptionPane.showInputDialog("Data Entry Program\n\n"
            + "College Employee (Enter C)\n"
            + "Faculty (Enter F)\n"
            + "Student (Enter S)\n"
            + "To Quit Data Entry and Print Report(Enter Q)\n\n"
            + "Enter Selection:");

         menuChoice=input.toUpperCase();

         //switch statement for adding
         switch (menuChoice)
         {
            case "C": {
                  //if less than allowed create new object
                  if (employeeCounter < NUM_EMPLOYEES)
                  {
                     CollegeEmployee employee = new CollegeEmployee();

                     employee.setPersonData();

                     collegeEmployeeArray[employeeCounter] = employee;
```

```
            employeeCounter = employee.getEmpCount();
          }

          else
          {
            JOptionPane.showMessageDialog(null, "The number"
            + " of College Employees has reached the "
            + "maximum. Please Enter a different choice.");
          }
        }
    break;

case "F": {
          //if less than allowed create new object
          if (facultyCounter < NUM_FACULTY)
          {
            Faculty collegeFaculty = new Faculty();
            collegeFaculty.setPersonData();

            facultyArray[facultyCounter] = collegeFaculty;

            facultyCounter = collegeFaculty.getFCount();
          }

          else
          {
            JOptionPane.showMessageDialog(null, "The number"
            + " of Faculty has reached the "
            + "maximum. Please Enter a different choice.");
          }
        }
    break;

case "S": {
          //if less than allowed create new object
          if (studentCounter < NUM_STUDENTS)
          {
            Student collegeStudent = new Student();
            collegeStudent.setPersonData();

            studentArray[studentCounter] = collegeStudent;

            studentCounter = collegeStudent.getSCount();
          }

          else
          {
            JOptionPane.showMessageDialog(null, "The number"
            + " of Students has reached the "
            + "maximum. Please Enter a different choice.");
          }
        }
    break;

case "Q":{
          //display report if the user quits
          JOptionPane.showMessageDialog(null, "Data Entry "
```

```
            + "Complete \n\n"
            + "College List Report will be displayed.");
         }
      break;

   default:{
            //display message if choice is invalid
            JOptionPane.showMessageDialog(null, "The selection"
            + " entered is invalid.\n\n"
            + "Please Enter a valid menu choice.");
         }

}


//display report
if (menuChoice.equals("Q"))
{
   //header for report
   System.out.println("\nCOLLEGE LIST REPORT");

   //display the college employees
   System.out.println("-----------------------------------------"
         + "-----------------------------------------------------"
         + "-----------------------------------------------------");

   System.out.println("College Employees\n");

   System.out.printf("%-20s%-25s%-12s%-15s%-15s%-17s%-15s",
         "Name", "Street Address", "Zip Code", "Phone Number",
         "SSN", "Annual Salary", "Department");

   //if less than needed
   if (employeeCounter < NUM_EMPLOYEES)
   {

      for ( int index = 0; index < employeeCounter; index++)
      {
         collegeEmployeeArray[index].displayPersonData();
      }

      System.out.printf("\n\n%d of %d College Employees have been "
            + "entered.\n", employeeCounter, NUM_EMPLOYEES);
   }

   //display all
   else
   {
      for ( int index = 0; index < employeeCounter; index++)
      {
         collegeEmployeeArray[index].displayPersonData();
      }
   }

   System.out.println();

   //display the faculty
```

```
System.out.println("-----------------------------------------"
      + "-----------------------------------------------"
      + "-----------------------------------------------");

System.out.println("Faculty\n");

System.out.printf("%-20s%-25s%-12s%-15s%-15s%-17s%-15s%-10s",
      "Name", "Street Address", "Zip Code", "Phone Number",
      "SSN", "Annual Salary", "Department", "Tenured");

if (facultyCounter < NUM_FACULTY)
{

   for ( int index = 0; index < facultyCounter; index++)
   {
      facultyArray[index].displayPersonData();
   }

   System.out.printf("\n\n%d of %d Faculty have been "
         + "entered.\n", facultyCounter, NUM_FACULTY);
}

else
{
   for ( int index = 0; index < facultyCounter; index++)
   {
      facultyArray[index].displayPersonData();
   }
}

System.out.println();

//display the students
System.out.println("-----------------------------------------"
      + "-----------------------------------------------"
      + "-----------------------------------------------");

System.out.println("Students\n");

System.out.printf("%-20s%-25s%-12s%-15s%-15s%-10s",
      "Name", "Street Address", "Zip Code", "Phone Number",
      "Major", "GPA");

if (studentCounter < NUM_STUDENTS)
{

   for ( int index = 0; index < studentCounter; index++)
   {
      studentArray[index].displayPersonData();
   }

   System.out.printf("\n\n%d of %d Students have been "
         + "entered.\n", studentCounter, NUM_STUDENTS);
}

else
{
```

```
            for ( int index = 0; index < facultyCounter; index++)
            {
               studentArray[index].displayPersonData();
            }
          }

          System.out.println();
        }

     }

  }

}
```

OUTPUT

COLLEGE LIST REPORT

College Employees

Name	Street Address	Zip Code	Phone Number	SSN	Annual Salary	Department
Anna Smith	123 Main Street	30010	555-222-2222	012-34-4565	$ 50000.00	Admissions
Bob Williams	459 Water Street	30154	555-888-2222	500-00-1234	$ 40000.00	Maintenance

2 of 4 College Employees have been entered.

Faculty

Name	Street Address	Zip Code	Phone Number	SSN	Annual Salary	Department	Tenured
Jane Jones	498 River Road	35451	555-777-8458	019-99-0000	$ 30000.00	Biology	YES
Gary Green	654 Oak Road	35451	555-219-8500	999-01-1234	$ 35000.00	Mathematics	NO

2 of 3 Faculty have been entered.

Students

Name	Street Address	Zip Code	Phone Number	Major	GPA
Jim Henry	12-B Lake Street	32541	555-487-0125	Nursing	3.75
Sophia Timmons	54 Shadow Trace	35489	555-400-1254	Programming	3.91
Tim White	149 Willow Road	32598	555-854-0054	English	3.30

3 of 7 Students have been entered.

```
//Mickie Blair
```

Output - FinalProjectPeople (run)

```
run:

COLLEGE LIST REPORT
-----------------------------------------------------------------------------------------------------------------------------------
College Employees

Name                Street Address          Zip Code    Phone Number    SSN             Annual Salary    Department
Anna Smith          123 Main Street         30010       555-222-2222    012-34-4565     $ 50000.00       Admissions
Bob Williams        459 Water Street        30154       555-888-2222    500-00-1234     $ 40000.00       Maintanence

2 of 4 College Employees have been entered.

-----------------------------------------------------------------------------------------------------------------------------------
Faculty

Name                Street Address          Zip Code    Phone Number    SSN             Annual Salary    Department      Tenured
Jane Jones          498 River Road          35451       555-777-8458    019-99-0000     $ 30000.00       Biology         YES
Gary Green          654 Oak Road            35451       555-219-8500    999-01-1234     $ 35000.00       Mathematics     NO

2 of 3 Faculty have been entered.

-----------------------------------------------------------------------------------------------------------------------------------
Students

Name                Street Address          Zip Code    Phone Number    Major           GPA
Jim Henry           12-B Lake Street        32541       555-487-0125    Nursing         3.75
Sophia Timmons      54 Shadow Trace         35489       555-400-1254    Programming     3.91
Tim White           149 Willow Road         32598       555-854-0054    English         3.30

3 of 7 Students have been entered.

BUILD SUCCESSFUL (total time: 7 minutes 24 seconds)
```

FinalProjectPeople - NetBeans IDE 8.2

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Search (Ctrl+I)

<default config>

Projects | Files | Services

- FinalProjectPeople
  - Source Packages
    - FinalProjectPeople
      - CollegeEmployee.java
      - CollegeList.java
      - Faculty.java
      - Person.java
      - Student.java
  - Test Packages
  - Libraries
  - Test Libraries

Navigator

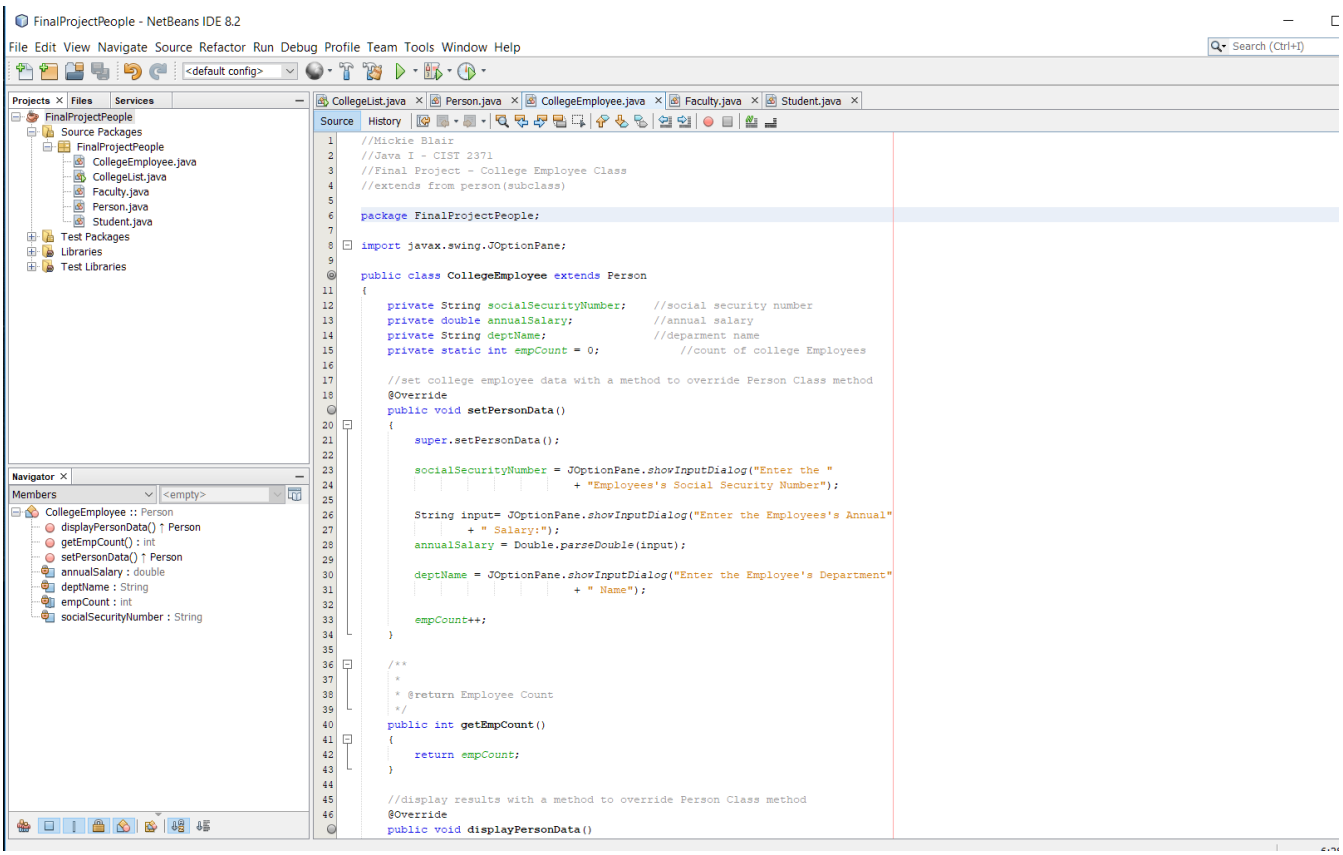
Members <empty>

- Person
  - displayPersonData()
  - setPersonData()
  - firstName : String
  - lastName : String
  - phoneNumber : String
  - streetAddress : String
  - zipCode : int

CollegeList.java | Person.java | CollegeEmployee.java | Faculty.java | Student.java

Source | History

```
1  //Mickie Blair
2  //Java I - CIST 2371
3  //Final Project - Person Class
4  //superclass
5
6  package FinalProjectPeople;
7
8  import javax.swing.JOptionPane;
9
10 public class Person
11 {
12     private String firstName;       //first name
13     private String lastName;        //last name
14     private String streetAddress;   //street address
15     private int zipCode;            //zip code
16     private String phoneNumber;     //phone number
17
18     //set person data
19     public void setPersonData()
20     {
21         firstName = JOptionPane.showInputDialog("Enter the First Name:");
22
23         lastName = JOptionPane.showInputDialog("Enter the Last Name:");
24
25         streetAddress = JOptionPane.showInputDialog("Enter the Street Address:");
26
27         String input= JOptionPane.showInputDialog("Enter the ZipCode:");
28         zipCode = Integer.parseInt(input);
29
30         phoneNumber= JOptionPane.showInputDialog("Enter the Phone Number:");
31     }
32
33     //display results on a single line
34     public void displayPersonData()
35     {
36         String fullName = firstName + " " + lastName;
37         System.out.printf("\n%-20s", fullName);
38         System.out.printf("%-25s", streetAddress);
39         System.out.printf("%-12d", zipCode);
40         System.out.printf("%-15s", phoneNumber);
41     }
42 }
43
```


FinalProjectPeople - NetBeans IDE 8.2
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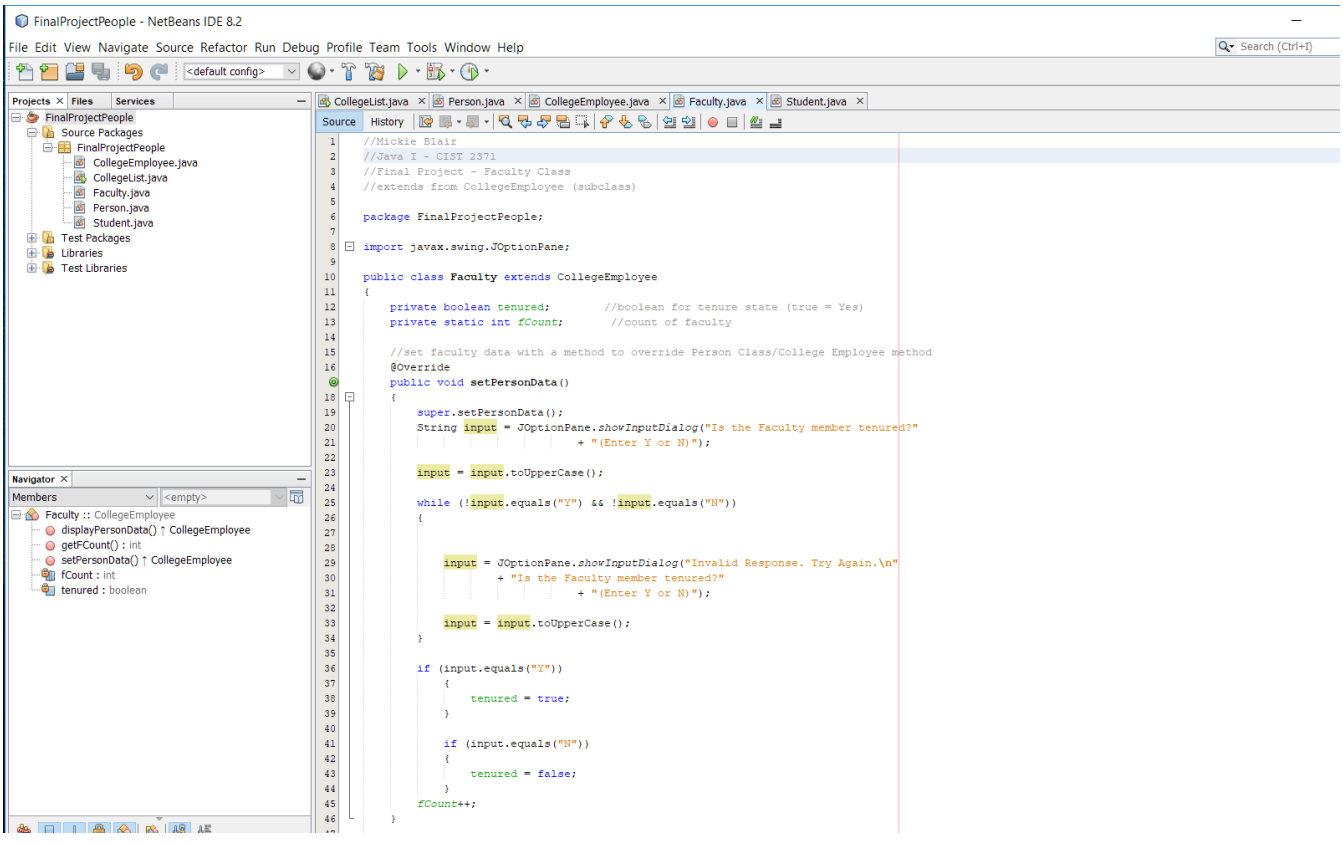
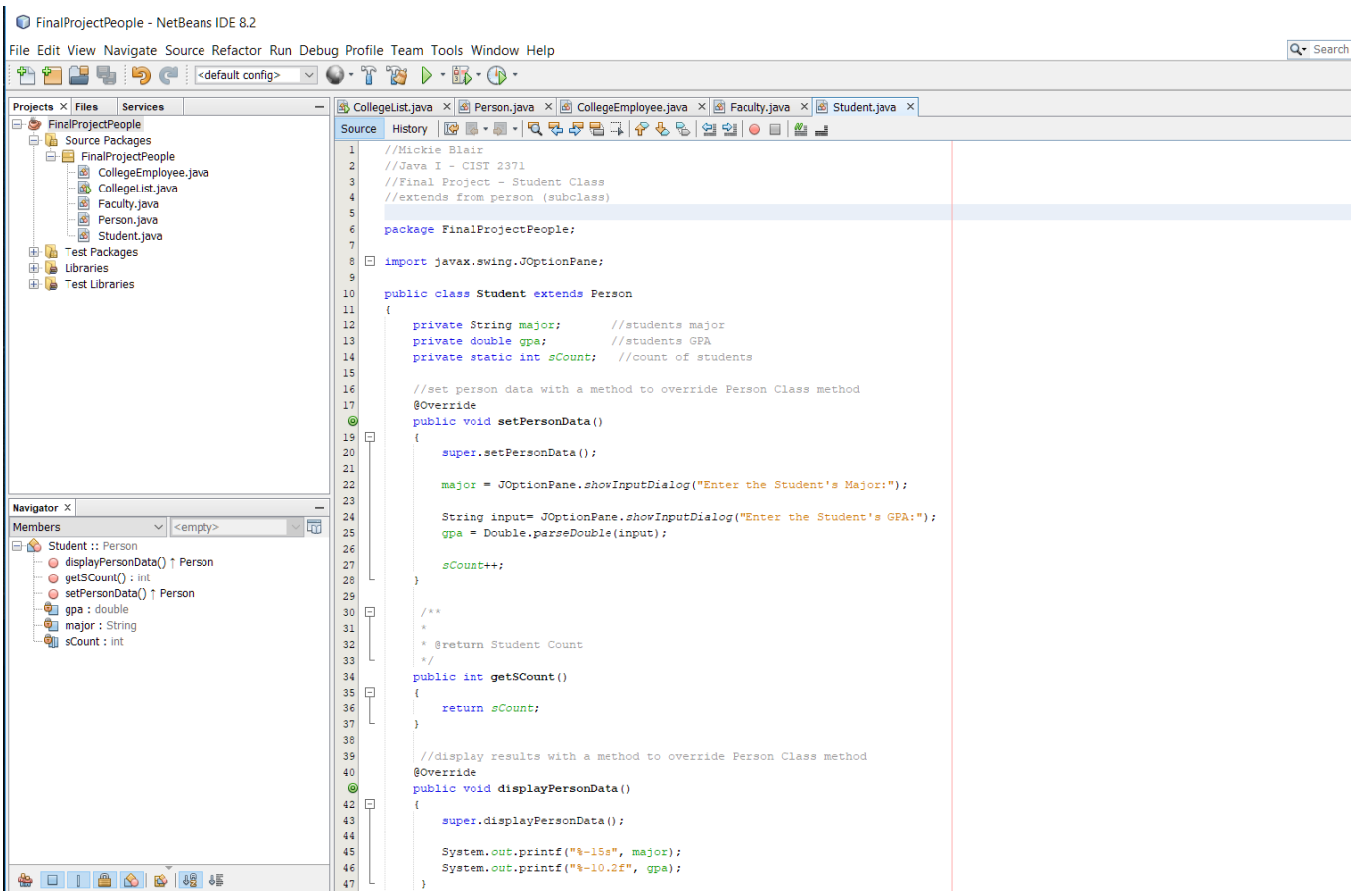
Search (Ctrl+I)
<default config>
Projects Files Services
FinalProjectPeople
Source Packages
FinalProjectPeople
CollegeEmployee.java
CollegeList.java
Faculty.java
Person.java
Student.java
Test Packages
Libraries
Test Libraries
Navigator
Members
<empty>
CollegeEmployee :: Person
displayPersonData() ↑ Person
getEmpCount() : int
setPersonData() ↑ Person
annualSalary : double
deptName : String
empCount : int
socialSecurityNumber : String
CollegeList.java
Person.java
CollegeEmployee.java
Faculty.java
Student.java
Source
History
//Mickie Blair
//Java I - CIST 2371
//Final Project - College Employee Class
//extends from person(subclass)
package FinalProjectPeople;
import javax.swing.JOptionPane;
public class CollegeEmployee extends Person
{
private String socialSecurityNumber; //social security number
private double annualSalary; //annual salary
private String deptName; //deparment name
private static int empCount = 0; //count of college Employees
//set college employee data with a method to override Person Class method
@Override
public void setPersonData()
{
super.setPersonData();
socialSecurityNumber = JOptionPane.showInputDialog("Enter the "
+ "Employees's Social Security Number");
String input= JOptionPane.showInputDialog("Enter the Employees's Annual"
+ " Salary:");
annualSalary = Double.parseDouble(input);
deptName = JOptionPane.showInputDialog("Enter the Employee's Department"
+ " Name");
empCount++;
}
/**
*
* @return Employee Count
*/
public int getEmpCount()
{
return empCount;
}
//display results with a method to override Person Class method
@Override
public void displayPersonData()


FinalProjectPeople - NetBeans IDE 8.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Search (Ctrl+I)
<default config>
Projects Files Services
FinalProjectPeople
Source Packages
FinalProjectPeople
CollegeEmployee.java
CollegeList.java
Faculty.java
Person.java
Student.java
Test Packages
Libraries
Test Libraries
Navigator
Members
<empty>
Faculty :: CollegeEmployee
displayPersonData() ↑ CollegeEmployee
getFCount() : int
setPersonData() ↑ CollegeEmployee
fCount : int
tenured : boolean
CollegeList.java
Person.java
CollegeEmployee.java
Faculty.java
Student.java
Source
History
//Mickie Blair
//Java I - CIST 2371
//Final Project - Faculty Class
//extends from CollegeEmployee (subclass)
package FinalProjectPeople;
import javax.swing.JOptionPane;
public class Faculty extends CollegeEmployee
{
private boolean tenured; //boolean for tenure state (true = Yes)
private static int fCount; //count of faculty
//set faculty data with a method to override Person Class/College Employee method
@Override
public void setPersonData()
{
super.setPersonData();
String input = JOptionPane.showInputDialog("Is the Faculty member tenured?"
+ "(Enter Y or N)");
input = input.toUpperCase();
while (!input.equals("Y") && !input.equals("N"))
{
input = JOptionPane.showInputDialog("Invalid Response. Try Again.\n"
+ "Is the Faculty member tenured?"
+ "(Enter Y or N)");
input = input.toUpperCase();
}
if (input.equals("Y"))
{
tenured = true;
}
if (input.equals("N"))
{
tenured = false;
}
fCount++;
}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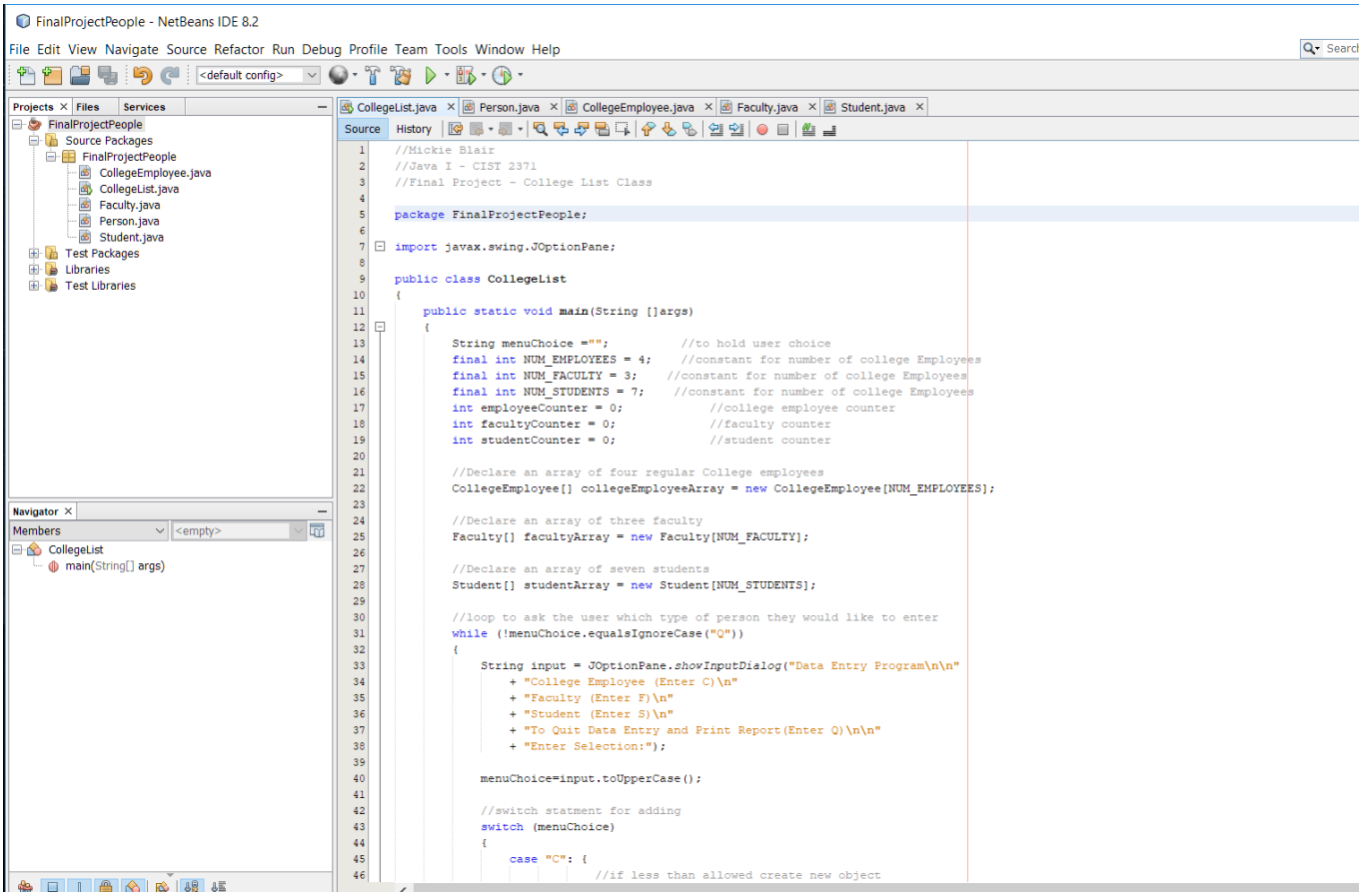
Test Packages
Libraries
Test Libraries
Navigator
Members
<empty>
Student :: Person
displayPersonData() ↑ Person
getSCount() : int
setPersonData() ↑ Person
gpa : double
major : String
sCount : int
CollegeList.java
Person.java
CollegeEmployee.java
Faculty.java
Student.java
Source History
1 //Mickie Blair
2 //Java I - CIST 2371
3 //Final Project - Student Class
4 //extends from person (subclass)
5
6 package FinalProjectPeople;
7
8 import javax.swing.JOptionPane;
9
10 public class Student extends Person
11 {
12 private String major; //students major
13 private double gpa; //students GPA
14 private static int sCount; //count of students
15
16 //set person data with a method to override Person Class method
17 @Override
18 public void setPersonData()
19 {
20 super.setPersonData();
21
22 major = JOptionPane.showInputDialog("Enter the Student's Major:");
23
24 String input= JOptionPane.showInputDialog("Enter the Student's GPA:");
25 gpa = Double.parseDouble(input);
26
27 sCount++;
28 }
29
30 /**
31 *
32 * @return Student Count
33 */
34 public int getSCount()
35 {
36 return sCount;
37 }
38
39 //display results with a method to override Person Class method
40 @Override
41 public void displayPersonData()
42 {
43 super.displayPersonData();
44
45 System.out.printf("%-15s", major);
46 System.out.printf("%-10.2f", gpa);
47 }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CollegeEmployee.java
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Faculty.java
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Test Libraries
Navigator
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<empty>
CollegeList
main(String[] args)
CollegeList.java
Person.java
CollegeEmployee.java
Faculty.java
Student.java
Source History
1 //Mickie Blair
2 //Java I - CIST 2371
3 //Final Project - College List Class
4
5 package FinalProjectPeople;
6
7 import javax.swing.JOptionPane;
8
9 public class CollegeList
10 {
11 public static void main(String []args)
12 {
13 String menuChoice =""; //to hold user choice
14 final int NUM_EMPLOYEES = 4; //constant for number of college Employees
15 final int NUM_FACULTY = 3; //constant for number of college Employees
16 final int NUM_STUDENTS = 7; //constant for number of college Employees
17 int employeeCounter = 0; //college employee counter
18 int facultyCounter = 0; //faculty counter
19 int studentCounter = 0; //student counter
20
21 //Declare an array of four regular College employees
22 CollegeEmployee[] collegeEmployeeArray = new CollegeEmployee[NUM_EMPLOYEES];
23
24 //Declare an array of three faculty
25 Faculty[] facultyArray = new Faculty[NUM_FACULTY];
26
27 //Declare an array of seven students
28 Student[] studentArray = new Student[NUM_STUDENTS];
29
30 //loop to ask the user which type of person they would like to enter
31 while (!menuChoice.equalsIgnoreCase("Q"))
32 {
33 String input = JOptionPane.showInputDialog("Data Entry Program\n\n"
34 + "College Employee (Enter C)\n"
35 + "Faculty (Enter F)\n"
36 + "Student (Enter S)\n"
37 + "To Quit Data Entry and Print Report(Enter Q)\n\n"
38 + "Enter Selection:");
39
40 menuChoice=input.toUpperCase();
41
42 //switch statment for adding
43 switch (menuChoice)
44 {
45 case "C": {
46 //if less than allowed create new object