

Allows the user to manage university employees interactively, including viewing info and calculating pay for faculty (weekly) or staff (hourly)

How has your program changed from planning to coding to now? Please explain?

First part of code

```
public class UEmployee
{
    /* Constructors */

    /*
    Purpose: Constructs a UEmployee object with a name and salary.
    */
    public UEmployee(String employeeName, double employeeSalary)
    {
        name = employeeName;
        salary = employeeSalary;
    }

    /* Instance Methods */

    /*
    Purpose: Returns the employee's name.
    */
    public String getName()
    {
        return name;
    }

    /*
    Purpose: Returns the employee's salary.
    */
    public double getSalary()
    {
        return salary;
    }

    /* Instance Fields */

    private String name;
    private double salary;
}
```

Second file

```
14  Class Purpose:
15  Represents a staff member who is a university employee with a job title.
16  */
17  public class Staff extends UEmployee
18  {
19      /* Constructors */
20
21      /*
22      Purpose: Constructs a Staff object with a name, salary, and job title.
23      */
24      public Staff(String employeeName, double employeeSalary, String staffJobTitle)
25      {
26          super(employeeName, employeeSalary);
27          jobTitle = staffJobTitle;
28      }
29
30      /* Instance Methods */
31
32      /*
33      Purpose: Returns the staff member's job title.
34      */
35      public String getJobTitle()
36      {
37          return jobTitle;
38      }
39
40      /* Instance Fields */
41
42      private String jobTitle;
43  }
44
```

Final file

```
10  */
17  public class Faculty extends UEmployee
18  {
19      /* Constructors */
20
21      /*
22      Purpose: Constructs a Faculty object with a name, salary, and department.
23      */
24      public Faculty(String employeeName, double employeeSalary, String departmentName)
25      {
26          super(employeeName, employeeSalary);
27          department = departmentName;
28      }
29
30      /* Instance Methods */
31
32      /*
33      Purpose: Returns the faculty member's department.
34      */
35      public String getDepartment()
36      {
37          return department;
38      }
39
40      /* Instance Fields */
41
42      private String department;
43  }
44
```

New as per teacher instructions - final

```
1 package mastery;
2
3 /*
4 Program: Faculty.java           Last Date of this Revision: January 28, 2026
5
6 Purpose: Represents a faculty member with a department and salary, including pay calculation.
7
8 Author: Bilal Hajar
9 School: CHHS
10 Course: Computer Programming 30
11 */
12
13 public class Faculty extends UEmployee
14 {
15     /* Constructors */
16
17     public Faculty(String employeeName, double employeeSalary, String departmentName)
18     {
19         super(employeeName, employeeSalary);
20         department = departmentName;
21     }
22
23     /* Instance Methods */
24
25     public String getDepartment()
26     {
27         return department;
28     }
29
30     public double calculatePay(double weeksWorked)
31     {
32         // Faculty are salaried: pay based on weeks worked
33         return (weeksWorked / TOTAL_WEEKS) * salary;
34     }
35
36     /* Instance Fields */
37
38     private String department;
39 }
40
```

```

1 package mastery;
2
3 /**
4  Program: Staff.java           Last Date of this Revision: January 28, 2026
5
6  Purpose: Represents a staff member with a job title and hourly salary, including pay calculation.
7
8  Author: Bilal Hajaj
9  School: CHHS
10 Course: Computer Programming 30
11 */
12
13 public class Staff extends UEmployee
14 {
15     /* Constructors */
16
17     /**
18      Purpose: Constructs a StaffAcct with name, hourly rate, and job title.
19      */
20     public Staff(String employeeName, double hourlyRate, String jobTitle)
21     {
22         super(employeeName, hourlyRate); // Correct: call UEmployee(String, double)
23         this.jobTitle = jobTitle;
24     }
25
26     /* Instance Methods */
27
28     public String getJobTitle()
29     {
30         return jobTitle;
31     }
32
33     /**
34      Purpose: Calculates pay based on hours worked.
35      */
36     public double calculatePay(double hoursWorked)
37     {
38         return salary * hoursWorked; // salary field stores hourly rate for staff
39     }
40
41     /* Instance Fields */
42
43     private String jobTitle;
44 }
45

```

```

25 public UEmployee(String employeeName, double employeeSalary)
26 {
27     name = employeeName;
28     salary = employeeSalary;
29 }
30
31 /* Instance Methods */
32
33 /**
34  Purpose: Returns the employee's name.
35  */
36 public String getName()
37 {
38     return name;
39 }
40
41 /**
42  Purpose: Returns the employee's salary.
43  */
44 public double getSalary()
45 {
46     return salary;
47 }
48
49 /**
50  Purpose: Calculates pay based on weeks worked (override in subclasses if needed).
51  */
52 public double calculatePay(double timeWorked)
53 {
54     return (timeWorked / TOTAL_WEEKS) * salary;
55 }
56
57 /* Instance Fields */
58
59 protected String name;
60 protected double salary;
61
62 /* Static Fields */
63
64 protected static final double TOTAL_WEEKS = 52.0;
65 }
66

```

Test client

```
15  */
16
17  public class UEmployeeClient
18  {
19      public static void main(String[] args)
20      {
21          Scanner input = new Scanner(System.in);
22          UEmployee employee = null;
23          char mainChoice;
24          int typeChoice;
25
26          do
27          {
28              System.out.println("\n--- Main Menu ---");
29              System.out.println("(E)mploy - Check Employee Info");
30              System.out.println("(P)ay - Calculate Pay");
31              System.out.println("(Q)uit - Exit Program");
32              System.out.print("Choose an option: ");
33              mainChoice = Character.toUpperCase(input.nextLine().charAt(0));
34
35              if (mainChoice == 'E' || mainChoice == 'P')
36              {
37                  System.out.println("\nSelect Employee Type:");
38                  System.out.println("1 - Faculty (Manager, $100,000/year)");
39                  System.out.println("2 - Staff (Hourly, $15/hour)");
40                  System.out.print("Enter 1 or 2: ");
41                  typeChoice = input.nextInt();
42                  input.nextLine(); // consume newline
43
44                  // create employee if null or type changed
45                  if (employee == null || employee instanceof Faculty && typeChoice != 1
46                      || employee instanceof Staff && typeChoice != 2)
47                  {
48                      System.out.print("Enter employee name: ");
49                      String name = input.nextLine();
50
51                      if (typeChoice == 1)
52                      {
53                          // Hard-coded manager salary
54                          employee = new Faculty(name, 100000.0, "Management");
55                      }
56                      else
57                      {
58                          // Hard-coded staff hourly rate
59                          employee = new Staff(name, 15.0, "Staff");
60                      }
61                  }
62
63                  if (mainChoice == 'E')
```