

Test.java

```
1 public class Test
2 {
3     public static void main(String[] args)
4     {
5
6
7         Student student = new
            Student("Devin", "Campbell", 111, "main", "st.", 1234567890L, "student@svsu.edu", ClassLevel.SOPHOMORE
        );
8         Person person = new Person("Devin", "Campbell", 111, "main", "st.",
            1234567890L, "Person@svsu.edu");
9         Employee employee = new Employee("Devin", "Campbell", 111, "main", "st.",
            1234567890L, "employee@svsu.edu", "CS146", 50000);
10        Staff staff = new Staff("Devin", "Campbell", 111, "main", "st.",
            1234567890L, "staff@svsu.edu", "CS146", 50000, "Professor");
11        Faculty faculty = new Faculty("Devin", "Campbell", 111, "main", "st.",
            1234567890L, "faculty@svsu.edu", "CS146", 50000, 480, 990, "El Capitan");
12
13
14        System.out.println("~~Person~~");
15        System.out.println(person.toString());
16        System.out.println("\n~~Student~~");
17        System.out.println(student.toString());
18        System.out.println("\n~~Employee~~");
19        System.out.println(employee.toString());
20        System.out.println("\n~~Staff~~");
21        System.out.println(staff.toString());
22        System.out.println("\n~~Faculty~~");
23        System.out.println(faculty.toString());
24
25    }
26
27 }
28
```

Person.java

```
1 public class Person
2 {
3     Email eMail;
4     TelNumber phoneNumber;
5     Address address;
6     Name name;
7     Person(String First, String Last, int streetNumber, String streetName, String
      streetSuffix,
8         long phoneNumber, String eMail)
9     {
10         this.name = new Name(First, Last);
11         this.address = new Address(streetNumber, streetName, streetSuffix);
12         this.phoneNumber = new TelNumber(phoneNumber);
13         this.eMail = new Email(eMail);
14     }
15     public String toString()
16     {
17         String output;
18         output = String.format("\nName: %s\nAddress: %s\nPhone Number: %s\nEmail: %s",
19             name.toString(), address.toString(), phoneNumber.toString(), eMail.toString());
20         return output;
21     }
22 }
23 }
24
25 class Name
26 {
27     String FirstName, LastName;
28     Name(String firstName, String lastName){
29         this.FirstName = firstName;
30         this.LastName = lastName;
31     }
32     public String toString()
33     {
34         String output = LastName+", "+FirstName;
35         return output;
36     }
37 }
38
39 class Address
40 {
41     int streetNumber;
42     String streetName, streetSuffix;
43
44     Address(int streetNumber, String streetName, String streetSuffix)
45     {
46         this.streetNumber = streetNumber;
47         this.streetName = streetName;
48         this.streetSuffix = streetSuffix;
49     }
50     public String toString()
51     {
52         String output = streetNumber+" "+streetName+" "+streetSuffix;
53         return output;
54     }
55 }
56
```

Person.java

```
57 class TelNumber
58 {
59     private long AreaCode, PhoneNumber;
60     TelNumber(long PhoneNumberWithAreaCode)
61     {
62         String temp = Long.toString(PhoneNumberWithAreaCode).substring(0,3);
63         AreaCode = Long.parseLong(temp);
64         temp = Long.toString(PhoneNumberWithAreaCode).substring(3);
65         PhoneNumber = Long.parseLong(temp);
66     }
67     TelNumber(long areaCode, long phoneNumber)
68     {
69         this.AreaCode = areaCode;
70         this.PhoneNumber = phoneNumber;
71     }
72
73     public String toString()
74     {
75         String output = "";
76         output = "("+Long.toString(AreaCode)+") "+Long.toString(PhoneNumber).substring(0,3)+
77             "-"+Long.toString(PhoneNumber).substring(3);
78         return output;
79     }
80 }
81
82 class Email
83 {
84     private String topLevelDomain, secondLevelDomain, address;
85     Email(String EmailAddress)
86     {
87         int i;
88         i = EmailAddress.indexOf('@');
89         this.address = EmailAddress.substring(0,i);
90         EmailAddress = EmailAddress.substring(i+1);
91         i = EmailAddress.indexOf('.');
92         this.secondLevelDomain = EmailAddress.substring(0,i);
93         this.topLevelDomain = EmailAddress.substring(i+1);
94     }
95     public String toString()
96     {
97         String output = address+"@"+secondLevelDomain+"."+topLevelDomain;
98         return output;
99     }
100 }
```

Student.java

```
1 public class Student extends Person
2 {
3
4     ClassLevel classStatus;
5     Student(String First, String Last, int streetNumber, String streetName, String
        streetSuffix, long phoneNumber,
6         String eMail, ClassLevel classStatus)
7     {
8         super(First, Last, streetNumber, streetName, streetSuffix, phoneNumber, eMail);
9         this.classStatus = classStatus;
10    }
11    public String toString()
12    {
13        String output = super.toString();
14        output+= String.format("\nClass status: %s", classStatus.value);
15        return output;
16    }
17 }
18
19
```

ClassLevel.java

```
1 public enum ClassLevel
2 {
3     FRESHMAN("Freshman"), SOPHOMORE("Sophomore"), JUNIOR("Junior"), SENIOR("Senior");
4     public String value;
5     ClassLevel(String CL)
6     {
7         this.value = CL;
8     }
9 }
10
```

Employee.java

```
1 public class Employee extends Person
2 {
3     String office;
4     double salary;
5     Employee(String First, String Last, int streetNumber, String streetName, String
        streetSuffix, long phoneNumber,
6         String eMail, String office, double salary)
7     {
8         super(First, Last, streetNumber, streetName, streetSuffix, phoneNumber, eMail);
9         this.office = office;
10        this.salary = salary;
11    }
12    public String toString()
13    {
14        String output = super.toString();
15        output += String.format("\nOffice Location: %s\nSalary: $%,.02f", office, salary);
16        return output;
17    }
18
19 }
```

Staff.java

```
1 public class Staff extends Employee
2 {
3     private String title;
4     Staff(String First, String Last, int streetNumber, String streetName, String streetSuffix,
5         long phoneNumber,
6         String eMail, String office, double salary, String title)
7     {
8         super(First, Last, streetNumber, streetName, streetSuffix, phoneNumber, eMail, office,
9         salary);
10        this.title = title;
11    }
12    public String toString()
13    {
14        String output = super.toString();
15        output += String.format("\nTitle: %s", title);
16        return output;
17    }
18 }
```

Faculty.java

```
1 public class Faculty extends Employee
2 {
3     OfficeHours hours;
4     String rank;
5     Faculty(String First, String Last, int streetNumber, String streetName, String
        streetSuffix, long phoneNumber,
6         String eMail, String office, double salary, int startTime, int endTime, String rank)
7     {
8         super(First, Last, streetNumber, streetName, streetSuffix, phoneNumber, eMail, office,
        salary);
9         hours = new OfficeHours(startTime, endTime);
10        this.rank = rank;
11    }
12    public String toString()
13    {
14        String output = super.toString();
15        output += String.format("\nOffice Hours: %s\nRank: %s", hours.toString(), rank);
16        return output;
17    }
18 }
19 class OfficeHours
20 {
21     // Time is incremented in Minutes
22     int startTime;
23     int endTime;
24     OfficeHours(int start, int end)
25     {
26         this.startTime = start;
27         this.endTime = end;
28     }
29     public String toString()
30     {
31         String output = "";
32         output = String.format("%02d:%02d -
        %02d:%02d", startTime/60, startTime%60, endTime/60, endTime%60);
33
34         return output;
35     }
36 }
37
```


