switch case statement:

1) Unlike if-else, switch will have multiple possible executions
2) Up to Java 1.4v switch accepts only 4 datatypes (int, byte, short & char)
3) From Java 1.5v onwards switch started accepting their respective wrapper class also. (Integer, Byte, Short & Character)
4) From Java 1.7v onwards switch started accepting String also.
5) Inside switch case we can write any number of case lables.
6) If a case label got matched with the key value then from that case all the cases which were present inside the switch will be getting executed.
7) In order to avoid this situation, if we want only the case which got matched with the key value to be executed then we need to use break statements.
8) Whenever the compiler came across break statement the program will not be terminated, the compiler will just come out from the block.
9) If no case label is matching with the key value then we can write default case.
10) default case will be getting executed only if no case label is matching with the key value **irrespective of its position**
11) We can write default case anywhere inside the switch case statement
12) Duplicate case labels are not allowed in switch.
13) key datatype and the case lable data types should be compatible.
14) Case label values range should be within the key datatype.

15) We can write expressions also at key and labels.
16) Individual statements are not allowed in switch case i.e., every statement should be belonging to a particular case.
17) Inside switch case we can write any valid Java code.
18) Every case label value should be compile time constant.
19) All the cases including break and default case are optional in switch

Syntax:

```
switch(Key)
{
  case lable1:
        --------;
        --------;
  case lable2:
        --------;
        --------;
  case lable3:
        --------;
        --------;
}
```

Understanding Switch Statement

- Unlike 'if' and 'if-else' statements, the switch statement can have a number of possible execution paths.
- Switch accepts byte, short, char, and int (1.4v) primitive data types, After jdk 1.5v it started accepting its corresponding '**wrapper classes**' also.
- From jdk 1.7v switch started accepting '**String**' also.
- Switch case should be present in side a loop.
- All the 'cases' and 'default' are optional in switch statement.
- Independent statements are not allowed inside switch.

Contd...

- Every case label should be "**compile time constant**".
- We can use expressions in the switch statements and in case labels also.
- Case labels range should be with in the range of the data type.
- Switch will not allow duplicate case labels.
- In the switch statement if any case got triggered then from that case onwards all statements will be executed until end of the switch (or) break
- We can write default case only once.
- The default statement is optional and can appear anywhere inside the switch block.

```
7         System.out.println("IMplementing switch case\n");
8
9         int i=30;
10        switch(i)
11        {
12            case 10:
13                System.out.println("case 10 executed");
14            case 20:
15                System.out.println("case 20 executed");
16            case 30:
17                System.out.println("case 30 executed");
18            case 40:
19                System.out.println("case 40 executed");
20            case 50:
21                System.out.println("case 50 executed");
22        }
23        System.out.println("\nCompiler came out from switch case");
24    }
25    public static void main(String[] args)
26    {
27        ClassA aobj=new ClassA();
28        aobj.meth1();
29    }
```

```
<terminated> ClassA [Java Application] C:\Program Fi
IMplementing switch cas

case 30 executed
case 40 executed
case 50 executed

Compiler came out from
```

```
7         System.out.println("IMplementing switch case\n");
8
9         int i=40;
10        switch(i)
11        {
12            case 10:
13                System.out.println("case 10 executed");
14            case 20:
15                System.out.println("case 20 executed");
16            case 30:
17                System.out.println("case 30 executed");
18            case 40:
19                System.out.println("case 40 executed");
20            case 50:
21                System.out.println("case 50 executed");
22        }
23        System.out.println("\nCompiler came out from switch case");
24    }
25    public static void main(String[] args)
26    {
27        ClassA aobj=new ClassA();
28        aobj.meth1();
29    }
```

```
<terminated> ClassA [Java Application] C:\Program
IMplementing switch cas

case 40 executed
case 50 executed

Compiler came out from
```

```
7         System.out.println("IMplementing switch case\n");
8
9         int i=10;
10        switch(i)
11        {
12            case 10:
13                System.out.println("case 10 executed");
14            case 20:
15                System.out.println("case 20 executed");
16            case 30:
17                System.out.println("case 30 executed");
18            case 40:
19                System.out.println("case 40 executed");
20            case 50:
21                System.out.println("case 50 executed");
22        }
23        System.out.println("\nCompiler came out from switch case");
24    }
25    public static void main(String[] args)
26    {
27        ClassA aobj=new ClassA();
28        aobj.meth1();
29    }
```

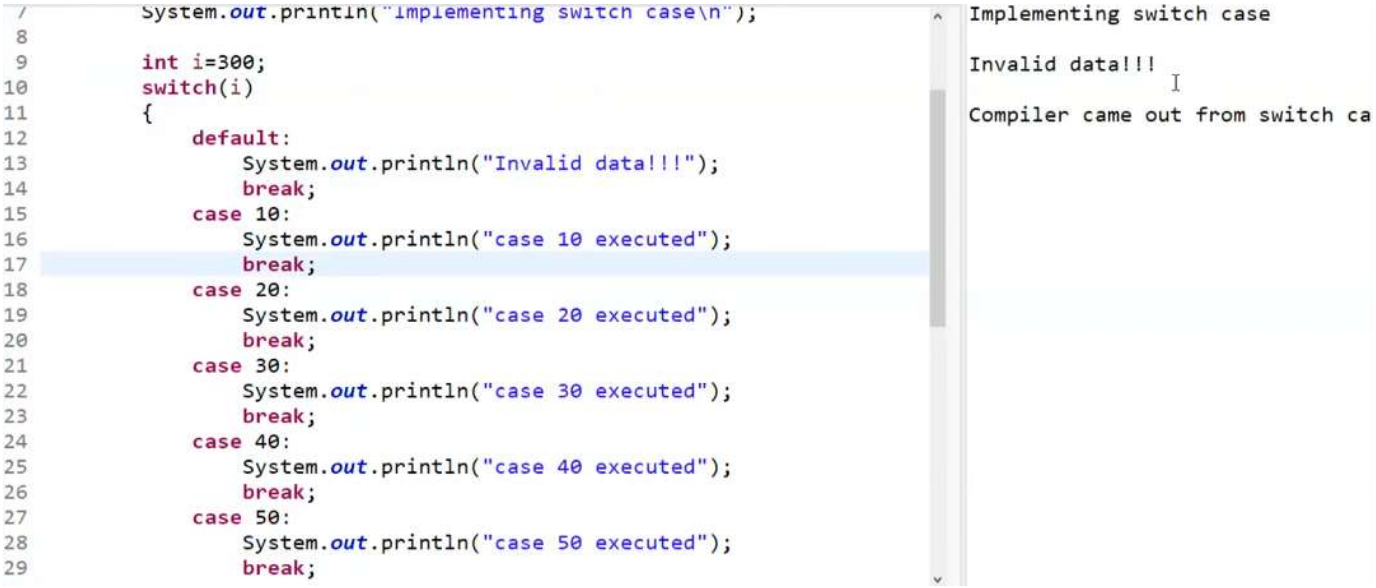
```
<terminated> ClassA [Java Application] C:\Program
IMplementing switch cas

case 10 executed
case 20 executed
case 30 executed
case 40 executed
case 50 executed

Compiler came out from
```

```
7         System.out.println("IMplementing switch case\n");
8
9         int i=10;
10        switch(i)
11        {
12            case 10:
13                System.out.println("case 10 executed");
14                break;
15            case 20:
16                System.out.println("case 20 executed");
17                break;
18            case 30:
19                System.out.println("case 30 executed");
20                break;
21            case 40:
22                System.out.println("case 40 executed");
23                break;
24            case 50:
25                System.out.println("case 50 executed");
26                break;
27        }
28        System.out.println("\nCompiler came out from switch case");
29    }
```

```
<terminated> ClassA [Java Application] C:\Program F
IMplementing switch cas

case 10 executed

Compiler came out from
```

```
5     void meth1()
6     {
7         System.out.println("Implementing switch case\n");
8
9         int i=300;
10        switch(i)
11        {
12            default:
13                System.out.println("Invalid data!!!");
14            case 10:
15                System.out.println("case 10 executed");
16                break;
17            case 20:
18                System.out.println("case 20 executed");
19                break;
20            case 30:
21                System.out.println("case 30 executed");
22                break;
23            case 40:
24                System.out.println("case 40 executed");
25                break;
26            case 50:
27                System.out.println("case 50 executed");
```

```
Implementing switch case

Invalid data!!!
case 10 executed

Compiler came out from switch ca
```



```
        System.out.println("Implementing switch case\n");

        int i=300;
        switch(i)
        {
            default:
                System.out.println("Invalid data!!!");
                break;
            case 10:
                System.out.println("case 10 executed");
                break;
            case 20:
                System.out.println("case 20 executed");
                break;
            case 30:
                System.out.println("case 30 executed");
                break;
            case 40:
                System.out.println("case 40 executed");
                break;
            case 50:
                System.out.println("case 50 executed");
                break;
```

```
Implementing switch case

Invalid data!!!

Compiler came out from switch ca
```

```java
public class ClassA
{
    void meth1(String name, int age, char gender, int no_tyres)
    {
        System.out.println("Implementing switch case\n");

        final int i=50; // final variables are compile time CONSTANTS
        //i++;// C.E
        byte b=20;
        switch(b+45)  // 20+45=65===> int
        {
        //System.out.println("Hello world");// C.E
            case 10:
                System.out.println("case 10 executed");
                break;
            case 20:
                System.out.println("case 20 executed");
                break;
            case 'A':
                System.out.println("case 65 executed");
                if(age>=18)
                {
                    System.out.println(name+" you are eligible for driving");
                    switch(gender)
                    {

                  case 'M','m':
                      System.out.println("User is Male");
                      switch(no_tyres)
                      {
                          case 2:
                              System.out.println("Mr."+name+" you can apply for 2 wheeler lisence");
                              break;
                          case 4:
                              System.out.println("Mr."+name+" you can apply for 4 wheeler lisence");
                              break;
                          case 6,10:
                              System.out.println("Mr."+name+" you can apply for Heavy vechicle lisence");
                              break;
                          default:
                              System.out.println("Invalid TYRE count Observed!!!");
                              break;
                      }
                      break;
                  case 'F','f':
                      System.out.println("User is Female");
                      switch(no_tyres)
                      {
                          case 2:
```

```
51                                  System.out.println("Miss."+name+" you can apply for 2 wheeler lisence");
52                                  break;
53                              case 4:
54                                  System.out.println("Miss."+name+" you can apply for 4 wheeler lisence");
55                                  break;
56                              case 6,10:
57                                  System.out.println("Miss."+name+" you can apply for Heavy vechicle lisence");
58                                  break;
59                              default:
60                                  System.out.println("Invalid TYRE count Observed!!!");
61                                  break;
62                          }
63                          break;
64                      default:
65                          System.out.println("Invalid Gender Data!!!");
66                          break;
67                  }
68              }
69              else
70              {
71                  System.out.println(name+" please come back after "+(18-age)+" years");
72              }
```

```
73                  break;
74              case 400-360:
75                  System.out.println("case 40 executed");
76                  break;
77              case i:
78                  System.out.println("case 50 executed");
79                  break;
80              default:
81                  System.out.println("Invalid data!!!");
82                  break;
83          }
84          System.out.println("\nCompiler came out from switch case");
85      }
86      public static void main(String[] args)
87      {
88          ClassA aobj=new ClassA();
89          aobj.meth1("Kishan",36,'m',4);
90      }
91  }
92
```

Assignment

Using switch case write a program on daily life.