

## Week 10 Tutorial

- Rounds
- 1 Spot the bug
  - 2 Match the mistakes to the code
  - 3 Advent Calendar

### Round 1 Spot the bug

2 points for each correct answer.

- 1)
- ```
boolean santa=true;
while(santa=true)
    santa=false;
```

ANS: Loop never finishes. Change =true to ==true.

- 2)
- ```
String reindeer;
do
{
    System.out.print("Any more?");
    reindeer=BasicIo.readString();
}
while(reindeer=="y");
```

ANS: Won't repeat while loop, ever. Need to use .equals().

- 3)
- ```
if(!strShape.equals("square"))
    System.out.println("Bad shape (for a bauble) Exiting...");
    System.out.exit(1);
    System.out.print("Enter a colour");
```

ANS: Never prints "Enter a colour". Need to add { and } to IF block.

- 4)
- ```
String astrNames[]={ "Dasher", "Donner", "Blitzen" };
for(int i=1; i<=astrNames.length; i++){
    System.out.println(astrNames[i]);
}
```

ANS: Index out of bounds. Change <= to < and 1 to 0. (Or [i] to [i-1].)

## Round 2 Match the mistakes to the code

For each code fragment (A-E) select the compilation error message (1-6) that the code would produce. N.B. one code fragment will have two error messages - if you get both then get 3 points, for all others, 1 point per match.

```
A) public class Reindeer
    {
        private Color nose=Color.red;
```

ANS: 5

```
B) public class Reindeer
    {
        private String name="";

        public setName(String inputname){
            name=inputname;
        }

    }
}
```

ANS: 3

```
C) public class Sleigh
{
    private Reindeer[] reindeer;

    public Sleigh(){
        reindeer=new Reindeer;
    }

    public boolean sleighReady(){
        return false;
    }
}
```

ANS: 6

```
D) import java.awt.*;

public class Sleigh
{
    private Color nose;
    private Reindeer[] reindeer;

    int i,deer=0;

    for(i=0;i<9;i++){
        deer++;
    }
}
```

ANS: 4

```
E) public boolean sleighReady(){
    int i,deer=0;
    for(i=0;i<9;i++){
        if(!reindeer[i].getName.equals("")){
            deer++;
        }
        if(deer>=8)
            return true;
        else
            return false;
    }
}
```

ANS: 2, and 1

ERRORS:

- 1) Return required at the end of boolean sleighReady()
- 2) Attempt to reference method getName in class Reindeer as an instance variable
- 3) class or interface declaration expected }
- 4) Type expected for(i=0;i<9;i++){
- 5) class Color not found. private Color nose=Color.red;
- 6) '(' expected.

### Round 3 Find your opponents' mistakes

Each team write a program to print out an advent calendar to the screen as follows:

MON	TUE	WED	THU	FRI	SAT	SUN
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25		

The program will take as an input the day of the week of the first day and outputs the appropriate calendar. In the example above, this was TUE.

Swap and find each others mistakes (1 point per mistake).