

Programming Principles I
Fall 2017

Name: _____

Exam 1

09/12/2017

Time Limit: 120 Minutes Instructor: Dr. Ferosh Jacob

- Please read the questions very carefully.
- This exam contains 3 pages (including this cover page) and 3 questions with total points 30.
- Try to attempt as many as possible. However, the maximum score you can reach is 100.
- Good luck!

Grade Table (for teacher use only)

Question	Points	Score
1	10	
2	10	
3	10	
Total:	30	

1 Trace a code segment

1. (10 points) What is the exact output of the following code segment?

Code:

```
for (int i=1; i<=4; i++)
{
    for (int j=1; j<=4; j++)
        System.out.print((j-i) + "\t");
    System.out.println();
}
```

2. (10 points) What is the exact output of the following code segment?

Code:

```
for (int i=0; i<3; i=i+1)
{
    for (int j=i*3; j<i*3+3; j=j+1)
        System.out.print(i + "; ");
    System.out.println();
}
```

3. (10 points) What is the exact output of the following code segment?

Code:

```
int counter;
for (counter = 7; counter <= 16; counter = counter +
    1)
{
    switch ((counter % 10))
    {
        case 0: System.out.print(", ");
            break;
        case 1: System.out.print("OFTEN ");
            break;
        case 2: System.out.print("NEVER ");
            break;
        case 3: System.out.print("DONE ");
            break;
        case 4: System.out.print("VERY ");
            break;
        case 5: System.out.print("WELL ");
            break;
        case 6: System.out.print(".");
            break;
        case 7: System.out.print("WHAT ");
            break;
        case 8: System.out.print("IS ");
            break;
        case 9: System.out.print("DONE");
            break;
        default: System.out.print("Bad Number. ");
    }
}
System.out.println();
```

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