

Assignment – Week 2

1. Write a program in java to generate following output on console.

```
Welcome to Core Java!  
=====
```

2. Execute the above program from windows command line.
3. Write a java program to accept your name and age, and print output as following.

```
What is your name? Ravi  
How old are you? 10  
Hello, Ravi. Next year, you'll be 11
```

4. Write a java program that draws a random combination of numbers for a lottery game. For example, if you play a “choose 6 numbers from 49” lottery, the program might print following output.

```
Bet the following combination. It'll make you rich!  
4  
7  
8  
19  
30  
44
```

5. Write a program to generate a table of numbers that shows how much an investment of 10,000 will grow under different interest rate scenarios in which interest is paid annually and reinvested (compound interest).

Growth of an Investment at Different Interest Rates

10%	11%	12%	13%	14%	15%
10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00
11,000.00	11,100.00	11,200.00	11,300.00	11,400.00	11,500.00

10%	11%	12%	13%	14%	15%
12,100.00	12,321.00	12,544.00	12,769.00	12,996.00	13,225.00
13,310.00	13,676.31	14,049.28	14,428.97	14,815.44	15,208.75
14,641.00	15,180.70	15,735.19	16,304.74	16,889.60	17,490.06
16,105.10	16,850.58	17,623.42	18,424.35	19,254.15	20,113.57
17,715.61	18,704.15	19,738.23	20,819.52	21,949.73	23,130.61
19,487.17	20,761.60	22,106.81	23,526.05	25,022.69	26,600.20
21,435.89	23,045.38	24,759.63	26,584.44	28,525.86	30,590.23
23,579.48	25,580.37	27,730.79	30,040.42	32,519.49	35,178.76

6. Write a program which determines how long it will take to save a specific amount of money for your well-earned retirement, assuming you deposit the same amount of money per year and the money earns a specified interest rate.

```
How much money do you need to retire? 5000
How much money will you contribute every year? 50
Interest rate in %: 2
You can retire in 55 years.
```

7. Write a java program which computes the new balance in your retirement account and then asks if you are ready to retire.

```
How much money will you contribute every year? 5000
Interest rate in %: 2
After year 1, your balance is 5,100.00
Ready to retire? (Y/N) n
```

8. Write a Java program to create a class Employee. Use a constructor to initialize employee name, salary and date of joining for each employee. Construct an Employee array and fill it with three Employee objects. Create a raiseSalary method to increase salary. Use the raiseSalary method of the Employee class to raise each employee's salary by 5%.

```
name=Carl Cracker,salary=78750.0,hireDay=1987-12-15
```

<pre>name=Harry Hacker,salary=52500.0,hireDay=1989-10-01 name=Tony Tester,salary=42000.0,hireDay=1990-03-15</pre>
