

# Java For Industry: Lab assignment 1

## Question 1:

Write a program that print out the data of a pretend employee. You should create a variable for each piece of information, choosing the most appropriate primitive type. The output should look like the following.

Employee Reference

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ID Number: 12345  
Name: "Jack Smith"  
Age: 52  
Salary: 27,736.80

**[3 marks]**

Enhance the program by adding two additional variables **yearsToRetirement** and **hourlyRate**, and calculate their values. Assume that Jack retires at 66 and that he works 35 hour week 52 weeks a year. **[4 marks]**

## Question 2:

Using a while loop, write a program to print out the first 100 even numbers from 1.

**[2 marks]**

Add the following to the program:

- Print out the odd number between 1-100 **[1 mark]**
- Print out the multiples of 4 between 1 and 100 **[2 marks]**
- Print out all the numbers between 1 and 100. Replace all multiples of 3 with Java, all multiples of 5 with Script and all multiples of 3 and 5 with JavaScript **[4 marks]**. e.g.

1  
2  
Java  
4  
Script  
Java  
7  
8

Java  
Script  
11  
Java  
13  
14  
JavaScript  
16  
17  
Java  
19  
...

### Question 3:

Given a salary, write a program called Tax.java to work out the tax that needs to be paid and print it to the screen, use the following tax rules:

- 0% tax on the first £15000
- 5% tax for anything over £15000 and less or equal to £30000
- 20% tax for anything over £30000 and less or equal to £50000
- 40% tax for anything over £50000

**Hint:** You want to work from the highest tax bracket to the lowest.

Here are some examples to test your program against:

Total tax on £60000.00 is £8750.00

Total tax on £22000.00 is £350.00

Total tax on £45500.00 is £3850.00

Total tax on £14500.00 is £0.00

Total tax on £48342.32 is £4418.46

Your output should be presented to 2 decimal places

**[4 marks]**

### Question 4:

Using a switch statement, write a menu system that emulates a bank telephone answering service.

The main menu of the service should have the following options:

1. Current accounts.
2. Credit cards
3. Loans
4. savings accounts

A user should be able to enter the numbers and a message is displayed telling them what they have selected.

Use a do while loop so that the application re-displays the main menu if a user enters something invalid or terminates if they press h (for hang up).

**[5 marks]**