**FOP 1 – Lab 5 Worksheet**

1. Type and run all the programs and examples from the lecture notes (at home).
2. Write a program for a motor insurance company which offers three categories of insurance based on the age of the applicant. Category A for those in the age group 18-26, category B for those in the age group 27 - 60 and category C for those over 60. The program should allow user to enter age and print the relevant insurance category. The program should also print the message invalid age if the age input is less than 18.
3. Write a program that allows a user to input the daily pay rate of an employee and the number of days worked, then it calculates the employee’s gross pay for the week. If the weekly pay is smaller than 500.0, then it should print “You are underpaid”, if the weekly pay is between 500.0 and 700.0 inclusively, the program should print “Your salary is ok”. If the weekly pay is over 700.0, it should print “Your salary is quite decent”. The program should also print “Goodbye user!!”, irrespective of the gross pay for the week.
4. Write a program that prompts the user to enter the group number and a day of the week and then prints the timetable for that day. For instance, if the user enters ‘7’ for group and ‘Monday’ for day, the program should display:

‘On Monday, Students of group 7 have 2 lectures: Netw. Basics lecture and PPD lecture.

They also have the APS lab’.

Use nested conditional structures and the timetable from the course coordination page.

1. Write a program that prompts the user to enter a month (using integers between 1 and 12); the program should determine and output the number of days in a given month; the program should also prompt the user to enter the year when the month is 2 (February) so that it can display whether the number of days is 28 or 29 (a leap year is every year divisible by four *except for* years which are both divisible by 100 and not divisible by 400; for example, the year 2000 *is* a leap year, but the years 1700, 1800, and 1900 were not); the program should also display an appropriate message if the user entered an invalid month.