**C Practice Problems: Set I-C**

**Part I – conditionals, loops, nested loops**

**Difficulty level: Hard**

1. Write a program which reads in a time (t) being the earliest time at which a passenger can arrive at his departure railway station, and a number (m) being the longest journey time in hours that he is prepared to tolerate. The program then reads N followed by N pairs of numbers being the departure and arrival times of N trains to the passenger's destination. Print out the departure time of his most suitable train( that arriving earliest at his destination).
2. Politicians and bankers often quote “the rule of 72” which says that if the annual rate of inflation is R% then a fixed sum of money will decline in value by half in a period of 72/R years. Test the accuracy of this rule by tabulating, for each value of k from 1 to 36

i) k

ii) the value of 72/k

iii) the time at which the value of a sum is actually halved when inflation is k%.

Assume that prices increase only once a year.

1. Twin primes are consecutive odd numbers both of which are prime numbers. Write a program which inputs two positive integers A and B and outputs all the twin primes in the range A to B.
2. Write a program which reads in a time (t) being the earliest time at which a passenger can arrive at his departure railway station, and a number (m) being the longest journey time in hours that he is prepared to tolerate. The program then reads N followed by N pairs of numbers being the departure and arrival times of N trains to the passenger's destination. Print out the departure time of his most suitable train( that arriving earliest at his destination).