CS2610: Computer Organization and Architecture Lab
January-May 2023 Semester
Programming Assignment 5

Date: 13th March, 2023

1. Write a x86 assembly language program for the following high-level language program statement assuming that all the variables are (a) 32-bit unsigned integers, (b) 32-bit signed integers, and (c) Real numbers of 'float' type:

   Z = (P+Q)*(R-S)+T/U-V*W ;

2. Write a x86 assembly language program for the following high-level language statement assuming that all the variables are (a) 32-bit signed integers and (b) Real numbers of 'float' type:

```
if ((U<V) && (W == X))
    G = E+F;
else
    G = E-F;
```

3. Write a x86 assembly language program for the following high-level language program:

```
char op;
int X, Y, Z;

switch (op) {

  case '+':  Z = X + Y; break;

  case '- ':  Z = X – Y; break;

  case '*': Z = X * Y; break;

  case '/': Z = X / Y; break;

  case '%': Z = X % Y; break;

  default:  Z = 0;
}
```

4. Write a x86 assembly language program for computing the squared norm of a vector (the sum of the squares of elements of a vector) assuming that the elements of the vector are 32-bit signed integers.