COMP 1603 – Lab/Tutorial 3

1. What is the output of the following C++ program?

```
#include <iostream>
using namespace std;

int main()
{
    float arr[5] = {12.5, 10.0, 13.5, 90.5, 0.5};
    float *ptr1 = &arr[0];
    float *ptr2 = ptr1 + 3;

    cout << *ptr2 << endl;
    cout << ptr2 - ptr1;

   return 0;
}
```

2. Write a program that accepts from the user an integer, n. Create an integer array of size n. Accept n values from the user and store them in the array. It is then required to print each element in the array. Array positions must be accessed using pointers.

3. What is the output of the following code snippet?

```
int main () {
   int  var;
   int  *ptr;
   int  **pptr;
   var = 3000;
   ptr = &var;
   pptr = &ptr;
   cout << "Value of var :" << var << endl;
   cout << "Value available at *ptr :" << *ptr << endl;
   cout << "Value available at **pptr :" << **pptr << endl;
   return 0;
}
```

4.

   a. Write a Node declaration to hold an integer. Write code to create and print a linked list with the integers 1, 2, and 3.

   b. Write a Node declaration to hold a character. Write code to create and print a linked list with the characters A, B, and C.

5.

a. Write code to build a linked list of integers. The user can enter any amount of integers he/she wishes and the data entry process is terminated by an entry of -1.

b. The user then wishes to find the sum of numbers in the linked list. Write a function which takes a pointer to the top of the linked list and performs the desired operation.

c. Write a function which given a pointer to the linked list of integers, returns the product of the even integers in the list.

6. Write a function that accepts a pointer to a linked list of integers and prints the last element (if any) in the list.