Lab Work 2 **Due Date: Apr.14.2020**

1 The C++ program below employs several functions, in the form of moments up to the 2nd order for a given array. Complete the program, write implementations of all functions and complete the main function to create **moments.cpp**

```
// moments.cpp
// check the function pointers' slides to complete this file

#include <iostream>
using namespace std;

double mass(int *ptr, int SIZE);     //order 0 moment
double mean(int *ptr, int SIZE);     //order 1 moment
double variance(int *ptr, int SIZE); //order 2 moment

double moment (...);  // 1.Complete the prototype for the function

int main()
{
   double result;
   int array[10]={ 10, 0, 96, 56, 34, 29, 76, 46, 33, 24};
   // 2. Declare and initialize function pointer array here.


   int i=0;
   for (i=0; i<3; i++)
      // 3. Call all of the functions and display the result using one
line of code here;


   //4. Declare and initialize functionPtr here to calculate variance of
the array in the following line
   result=moment( array, 10, functionPtr);
   return 0;
}
...
```

2 Complete **convert.cpp** using the following information

```
//convert.cpp
//conversion form decimal number system to another number system {2:9}
// Use the following form of the main function
int main(int argc, char*argv[]) //  ./test_convert 124 7   : this is the command

// Task 1. put all the declarations for the variables related to command line argument conversions
// Task 2. decide on the number of the digits after conversion
// Task 3. do the conversion
   // e.g: 124 in the decimal number system equals to the number 235 in the 7-number system
// Task 3. display what is done (e.g: (124)_(10) = (235)_(7))
```

For task 2 you may use this code segment

```
// decide on the number of the digits after conversion

    int ndigits=1;
    while(dNumber >pow(system, ndigits))
        ndigits ++;
    //e.g: for the decimal number 124 and the given number system 7 'ndigits' will be 3
```

- Submit your .cpp codes, in one zipped folder.
- A suitable name for the folder can be KOM3550_YourName_YourNumber_Lab2.{zip/rar}. Write a relevant title for the email you are sending. KOM3550_YourName_YourNumber_ KOM3550_YourName_YourNumber_Lab2 is a good option.

"No other e-mails will be even opened".

Dr. Muharrem Mercimek

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a. The due date is firm and it is the midnight just before the next class. The files should be submitted by the end of the due date.
b. Submit your documents via e-mail to programming.kom@gmail.com