1. Write program performs addition of two numbers using pointers. In program there are two integer variables x, y and two pointer variables p and q. Firstly assign the addresses of x and y to p and q respectively and then assign the sum of x and y to variable sum.

   *Note that & is address of operator and * is value at address operator.*

2. Write program that contains an array, print values and address of each element of array using loop.

3. Write a program to find sum of n elements entered by user. To perform this program, allocate memory dynamically using <u>malloc()</u> function.

4. Evaluate the code given below and try to guess what the output will be.

   a)

```
#include <stdio.h>
#include <string.h>
void alter(char * str){
        int i, length = strlen(str);
        for(i = 0; i < length / 2; i++){
                (*(str++))++;
        }
}
int main(void)
{
        char str[] = "IntroductionToProgramming";
        char * str2 = str;
        alter(str2);
        printf("%s\n", str);
        printf("%s\n", str2);
        return 0;
}
```

   b)

```
#include <stdio.h>
int guess_what(int * numbers, int * numbers2, int n){
        int i, diff = numbers2 - numbers;
        for(i = 0; i < n; i++){
                if(*numbers != *(numbers + diff))
                        return 0;
                numbers++;
        }
        return 1;
}

int main(void)
{
        int numbers[] = {1, 3, 5, 7, 9};
        int numbers2[] = {1, 3, 5, 7, 9};
        if(guess_what(numbers, numbers2, 5)){
                printf("out 1\n");
        }
        else{
                printf("out 2\n");
        }
        return 0;
}
```