10/6/21

1) Program to interchange the smallest and largest of an array.

```
# include <Stdio.h>
# include <Stdlib.h>
  void main ()
{
  int a [50], largest, smallest, n, swapper, i;
  printf ("Enter the number of elements in the array: \n");
  scanf ("%d", &n);
  printf ("Enter the elements of the array: \n");
  for (i = 0; i < n; i++)
   { scanf ("%d", &a [i]); }
    largest = 0;
    smallest = 0;
 for (i = 1; i < n; i++)
  { if (a [i] > a [largest])
  { largest = i; }
  if (a [i] < a [smallest])
   { smallest = i; }
  - }
   printf ("\n Before interchange: \n largest number = %d \n
                smallest number = %d", a[largest], a [smallest]);
swapper = a [largest];
a [largest] = a [smallest];
a [smallest] = swapper;
   printf ("\n After interchanging: \n largest number = %d \n
                smallest number = %d", a [largest], a [smallest]);
  }
```

2) Average of n numbers :

```
#include <stdio.h>
  void main ()
{ int n, a[50], sum, i;
  float avg;
    sum = 0;
  printf (" Enter the numbers of which you want
            to find the average : \n");
  scanf (" %d ", &n);
  printf (" Enter the numbers : \n");
  for (i = 0; i < n; i++)
  { scanf (" %d ", &a[i]);
  }
  for (i = 0; i < n; i++)
  { sum = sum + a[i];
  }
  avg = (float) sum/n;
  printf (" The average = %f ", avg);
}
```

3) Sum of squares of n odd numbers.

```
# include <stdio.h>
void main()
{
int n, i, j, sum = 0;
printf("Enter the number of odd numbers you
        wish to print : \n");
scanf("%d", &n);
for(i = 1; i <= (n*2); i++)
{
 sum = sum + (i*i);
}
}
printf("The sum of squares of first %d odd
        numbers = %d", n, sum);
}
```