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IBM19 CS210

3.) Selection Sort   With Modification.

```c
# Include <stdio.h>
# Include <time.h>
void sorting (int m[] ,int n,int k);
int man()
{
  int n, i, k;
  printf ("Please Enter number of elements :\n");
  scanf ("%d", &n);
  int m[n];
  print f ("Enter the elements :\n");

  for (i=0 ; i<n; i++)
  {
    scanf ("%d", &m[i]);
  }

  printf (" Enter the largest element position you want to
             find \n");
  scanf ("%d", &k);
  clock_t t;
  t = clock();
  sorting (m,n,k);
  t = clock()-t;
  double time_taken = ((double)t) / CLOCKS_PER_SEC;
  printf (" Sort function takes %f seconds\n",time taken);
}

void sorting (int m[], int n,int k)
{
  int i,j ,temp, pos ,small;
  for (i=0; i<n-1; i++)
  {
                (1)
```

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```
for (j=i+1 ; j<n ; j++)
{
    small = m[i];
    pos = i;
    if (m[j]<small )
    {
        small = m[j];
        temp = m[i];
        m[i]=m[j];
        m[j] = temp;
        pos = j;
    }
}
printf ("Result : \n");
for (i=0 ; i<n ; i++)
{
    print f (" %d\n",m[i]);
}
printf (" The largest element is %d",m[n-k]);
}
```

(2)

```
Please Enter number of elements :
3
Enter the elements :
666
6
66
Enter the largest element position you want to find
1
Result :
6
66
666
The largest element is 666Sort function takes 0.002000 seconds

Process returned 0 (0x0)   execution time : 9.659 s
Press any key to continue.
```

```
Please Enter number of elements :
3
Enter the elements :
666
6
66
Enter the largest element position you want to find
2
Result :
6
66
666
The largest element is 66Sort function takes 0.001000 seconds

Process returned 0 (0x0)   execution time : 21.359 s
Press any key to continue.
```