```
/*Sort a given set of N integer elements using Selection Sort technique.*/
#include<stdio.h>
#include<conio.h>
#include<process.h>
#include<stdlib.h>
#include<time.h>
// calculate time taken for different values of n

void selection_sort(int n,int arr[])
{
	int temp,small,pos;
	for(int i=0;i<n-1;i++)
	{
		small=arr[i];
		pos=i;
		for(int j=i+1;j<n;j++)
		{
			if(arr[j]<small)
			{
				small=arr[j];
				pos=j;
			}
		}
		temp=arr[i];
		arr[i]=arr[pos];
		arr[pos]=temp;
	}
}
/*void display()
{
	for(int i=0;i<n;i++)
		printf("%d   ",arr[i]);
	printf("\n");
}*/


void main()
{
	int a[15000],n;
   clock_t start,end;
	n=500;
	while(n<=14500)
	{
		for(int i=0;i<n;i++)
```

```
                        a[i]=n-i;

                start=clock();
                selection_sort(n,a);

            //delay
                for(int j=0;j<=100;j++);

                end=clock();

                printf("time taken by %d elements = %f secs
\n",n,((double)(end-start))/CLOCKS_PER_SEC);
                n=n+1000;
        }

}
```

```
C:\Users\Prashanth\Documents\ADA LAB>gcc -o obj sel_sort.c

C:\Users\Prashanth\Documents\ADA LAB>obj
time taken by 500 elements = 0.000000 secs
time taken by 1500 elements = 0.007000 secs
time taken by 2500 elements = 0.008000 secs
time taken by 3500 elements = 0.016000 secs
time taken by 4500 elements = 0.030000 secs
time taken by 5500 elements = 0.033000 secs
time taken by 6500 elements = 0.056000 secs
time taken by 7500 elements = 0.070000 secs
time taken by 8500 elements = 0.090000 secs
time taken by 9500 elements = 0.109000 secs
time taken by 10500 elements = 0.142000 secs
time taken by 11500 elements = 0.166000 secs
time taken by 12500 elements = 0.303000 secs
time taken by 13500 elements = 0.485000 secs
time taken by 14500 elements = 0.563000 secs
```