

Linear Search Program

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4-D

```
#include <stdio.h>
#include <time.h>
int linears(int i);
int a[5],key;
void main()
{
    int i,b;
    printf("Enter 5 numbers\n");
    for(i=0;i<=4;i++)
    {
        scanf("%d",&a[i]);
    }
    printf("Enter the number to be searched\n");
    scanf("%d",&key);
    clock_t start,end;
    start=clock();
    b=linears(0);
    end=clock();
    printf("Time taken:%f\n",(((double)(end-start))/CLOCKS_PER_SEC));
    if(b==5)
```

```
printf("Number not found\n");  
else  
printf("Number found at position: %d\n",b+1);  
}  
int linears(int i)  
{  
    if(i==5)  
        return 5;  
    else if(a[i]==key)  
        return i;  
    else  
        linears(++i);  
}
```