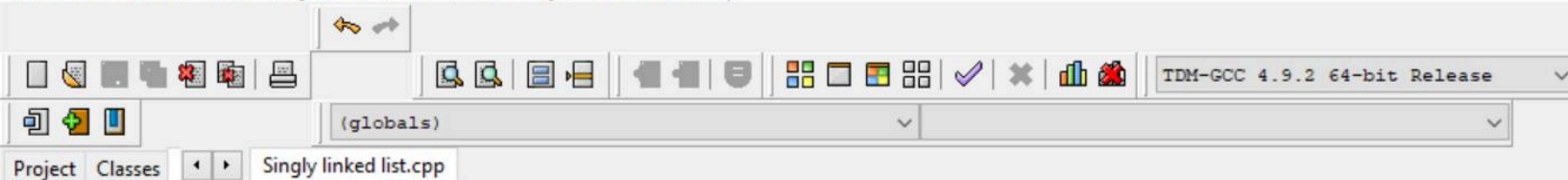
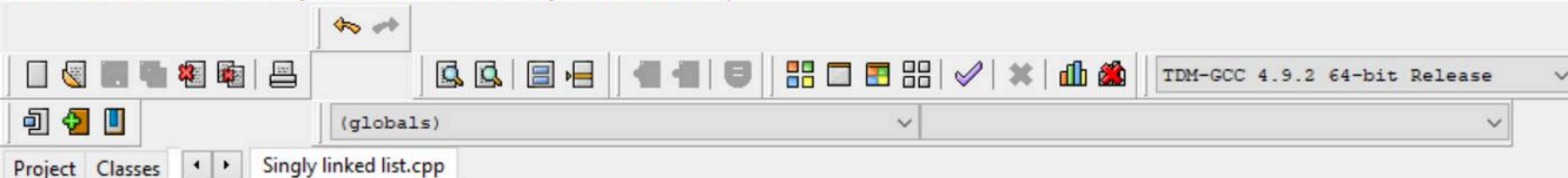


```
1  #include<stdio.h>
2  #include<stdlib.h>
3  struct node
4  {
5      int info;
6      struct node *link;
7  };
8  typedef struct node *NODE;
9  NODE getnode()
10 {
11     NODE x;
12     x=(NODE)malloc(sizeof(struct node));
13     if(x==NULL)
14     {
15         printf("memory full\n");
16         exit(0);
17     }
18     return x;
19 }
20 void freenode(NODE x)
21 {
22     free(x);
23 }
24 NODE insert_front(NODE first,int item)
25 {
26     NODE temp;
27     temp=getnode();
28     temp->info=item;
29     temp->link=NULL;
30     if(first==NULL)
31     return temp;
32     temp->link=first;
33     first=temp;
34     return first;
35 }
36
37 NODE insert_rear(NODE first,int item)
38 {
39     NODE temp,cur;
40     temp=getnode();
```



Singly linked list.cpp

```
36
37 NODE insert_rear(NODE first,int item)
38 {
39     NODE temp,cur;
40     temp=getnode();
41     temp->info=item;
42     temp->link=NULL;
43     if(first==NULL)
44         return temp;
45     cur=first;
46     while(cur->link!=NULL)
47         cur=cur->link;
48     cur->link=temp;
49     return first;
50 }
51
52
53 void display(NODE first)
54 {
55     NODE temp;
56     if(first==NULL)
57         printf("list empty cannot display items\n");
58     for(temp=first;temp!=NULL;temp=temp->link)
59     {
60         printf("%d\n",temp->info);
61     }
62 }
63
64 int main()
65 {
66     int item,choice;
67     NODE first=NULL;
68
69     for(;;)
70     {
71         printf("\n1:Insert_front\n2:Insert_rear\n3:display_list\n4:Exit\n");
72         printf("enter the choice\n");
73         scanf("%d",&choice);
74         switch(choice)
75         {
76             case 1:printf("enter the item at front-end\n");
```



```
52
53 void display(NODE first)
54 {
55     NODE temp;
56     if(first==NULL)
57         printf("list empty cannot display items\n");
58     for(temp=first;temp!=NULL;temp=temp->link)
59     {
60         printf("%d\n",temp->info);
61     }
62 }
63 int main()
64 {
65     int item,choice;
66     NODE first=NULL;
67
68     for(;;)
69     {
70         printf("\n1:Insert_front\n2:Insert_rear\n3:display_list\n4:Exit\n");
71         printf("enter the choice\n");
72         scanf("%d",&choice);
73         switch(choice)
74         {
75             case 1:printf("enter the item at front-end\n");
76                     scanf("%d",&item);
77                     first=insert_front(first,item);
78                     break;
79             case 2:printf("enter the item at rear-end\n");
80                     scanf("%d",&item);
81                     first=insert_rear(first,item);
82                     break;
83             case 3:display(first);
84                     break;
85             default:exit(0);
86                     break;
87         }
88     }
89 }
90 }
91 }
```

C:\Users\Nikita\Desktop\programs\Singly linked list.exe

1:Insert_front
2:Insert_rear
3:display_list
4:Exit
enter the choice
1
enter the item at front-end
20

1:Insert_front
2:Insert_rear
3:display_list
4:Exit
enter the choice
1
enter the item at front-end
30

1:Insert_front
2:Insert_rear
3:display_list
4:Exit
enter the choice
1
enter the item at front-end
40

1:Insert_front
2:Insert_rear
3:display_list
4:Exit
enter the choice
3
40
30
20

1:Insert_front
2:Insert_rear
3:display_list
4:Exit

Windows Start button and search bar with text "Type here to search"



C:\Users\Nikita\Desktop\programs\Singly linked list.exe

```
2:Insert_rear
3:display_list
4:Exit
enter the choice
3
40
30
20

1:Insert_front
2:Insert_rear
3:display_list
4:Exit
enter the choice
2
enter the item at rear-end
10

1:Insert_front
2:Insert_rear
3:display_list
4:Exit
enter the choice
3
40
30
20
10

1:Insert_front
2:Insert_rear
3:display_list
4:Exit
enter the choice
```

Type here to search



12:01
18-11-2020

