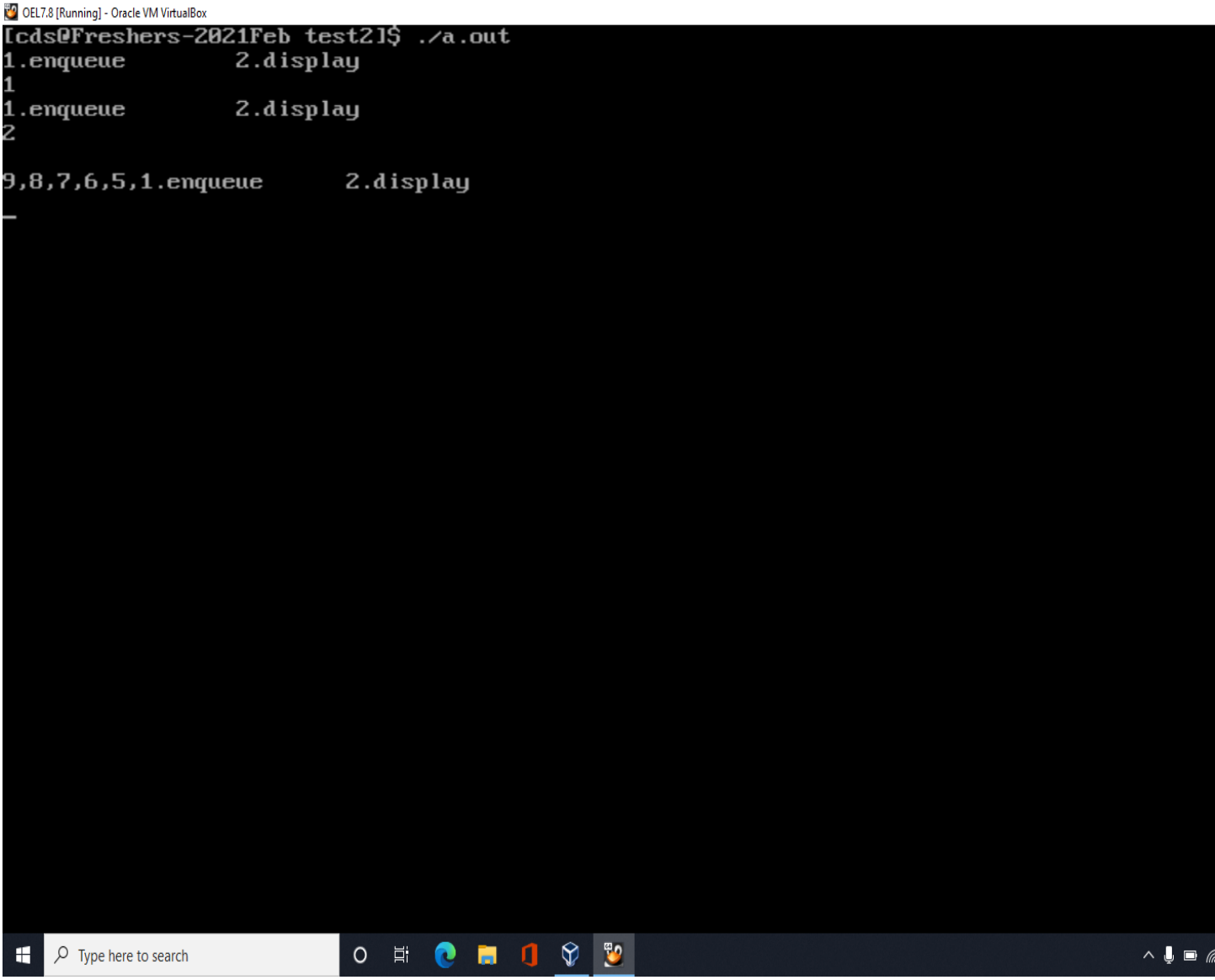
1) create a queue and enque with the following elements in order 9,8,7,6,5

OEL7.8 [Running] - Oracle VM VirtualBox

```
#include<stdio.h>
#include<stdlib.h>
struct node
{
int data;
struct node *nex;
};
struct node* head=NULL;

void enque(int e)
{
int da;
da=e;
if(head==NULL)
{
struct node* new=(struct node*)malloc(sizeof(struct node*));
new->data=da;
new->nex=NULL;
head=new;
}
else
{
struct node* new=(struct node*)malloc(sizeof(struct node*));
new->data=da;
new->nex=NULL;
struct node* p;
p=head;
while(p->nex!=NULL)
{
p=p->nex;
}
p->nex=new;
}
}
void dis()
{
```

OEL7.8 [Running] - Oracle VM VirtualBox

```
p->nex=new;
}
}
void dis()
{
struct node* n;
n=head;
while(n!=NULL)
{
printf("%d",n->data);
n=n->nex;
}
}

int main()
{
int c,i;
while(1)
{
printf("1.enqueue\t 2.display\n");
scanf("%d",&c);
switch(c)
{
case 1:for(i=9;i>4;i--)
        enque(i);
        break;
case 2:dis();
        break;
default:exit(0);
}
}
return 0;
}
```



2)write a c program to push elememts into stack and function to print no. Of elements in the stack

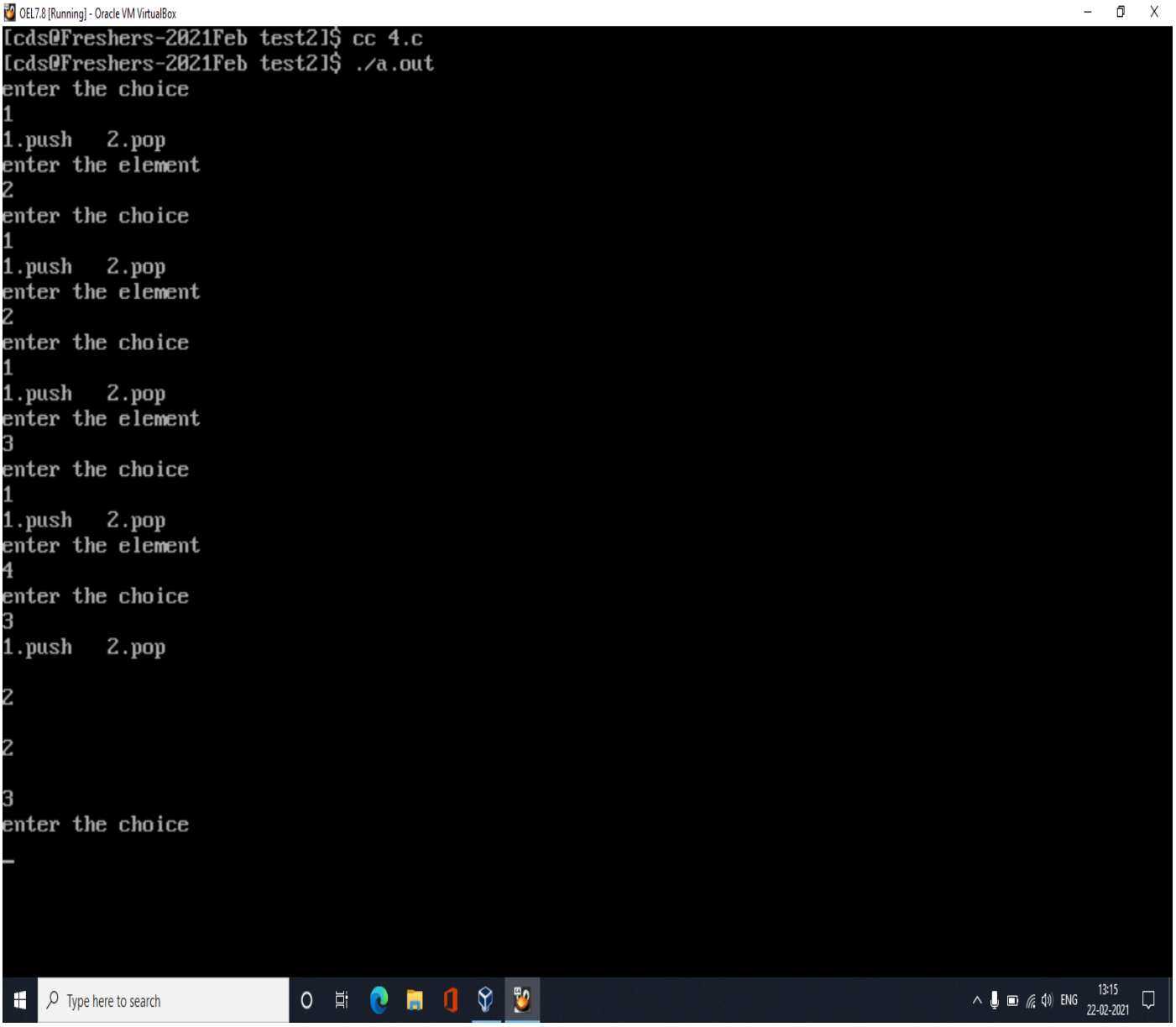
OEL7.8 [Running] - Oracle VM VirtualBox

```
#include<stdio.h>
#include<stdlib.h>

int top=-1,stack[10];
void push()
{ int d;
printf("enter the element\n");
scanf("%d",&d);
top++;
stack[top]=d;
}
void pop()
{
stack[top]=0;
top--;
}
void dis()
{ int i;
for(i=0;i<top;i++)
printf("\n%d\n",stack[i]);
}

void main()
{int c;
while(1)
{
printf("enter the choice\n");
scanf("%d",&c);
printf("1.push \t 2.pop\n");
switch(c)
{
case 1:push();
        break;
case 2:pop();
        break;
case 3:dis();
"4.c" 41L, 464C
```

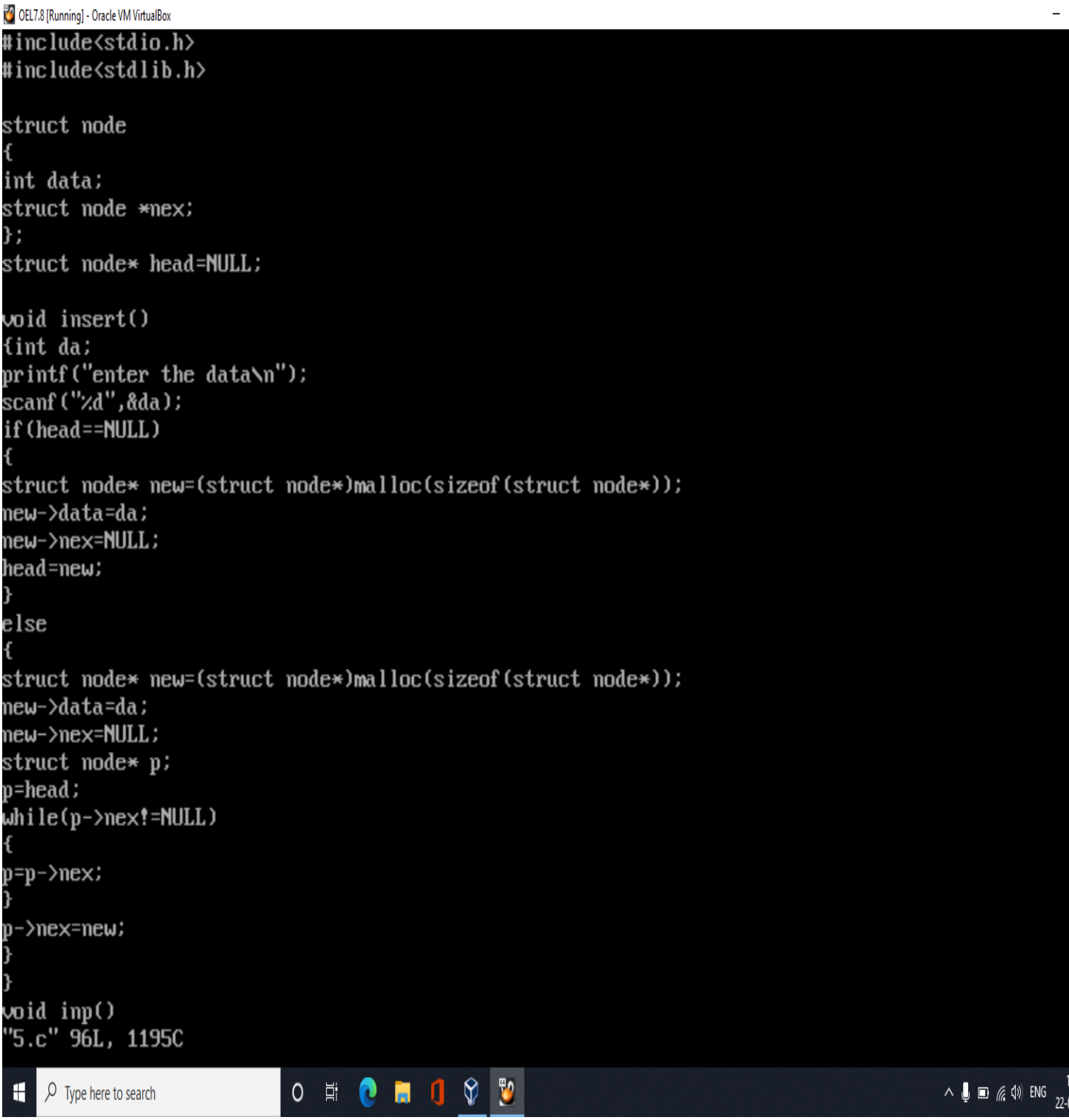
Type here to search

OEL7.8 [Running] - Oracle VM VirtualBox

```
{ int d;
printf("enter the element\n");
scanf("%d",&d);
top++;
stack[top]=d;
}
void pop()
{
stack[top]=0;
top--;
}
void dis()
{ int i;
for(i=0;i<top;i++)
printf("\n%d\n",stack[i]);
}

void main()
{int c;
while(1)
{
printf("enter the choice\n");
scanf("%d",&c);
printf("1.push \t 2.pop\n");
switch(c)
{
case 1:push();
        break;
case 2:pop();
        break;
case 3:dis();
        break;
default:exit(0);
}
}
}
```


OEL7.8 [Running] - Oracle VM VirtualBox
[cds@Freshers-2021Feb test2]$ cc 4.c
[cds@Freshers-2021Feb test2]$ ./a.out
enter the choice
1
1.push   2.pop
enter the element
2
enter the choice
1
1.push   2.pop
enter the element
2
enter the choice
1
1.push   2.pop
enter the element
3
enter the choice
1
1.push   2.pop
enter the element
4
enter the choice
3
1.push   2.pop
2
2
3
enter the choice
Type here to search
ENG
13:15
22-02-2021

3)write a c program to insert at position in a linked list.



OEL7.8 [Running] - Oracle VM VirtualBox

```
}
void inp()
{
int da1,p;
printf("enter the data\n");
scanf("%d",&da1);
printf("enter the position\n");
scanf("%d",&p);
if(head==NULL)
{
printf("no node is created\n");
exit(0);
}
else
{
struct node* new2=(struct node*)malloc(sizeof(struct node*));
new2->data=da1;
struct node* pt;
struct node* pt1;
pt=head;
pt1=head;
while(p!=0)
{
p=p-1;
pt1=pt1->nex;
pt=pt->nex;
}
pt1=pt1->nex;
pt->nex=new2;
new2->nex=pt1;
}
}
void dis()
{
struct node* pp;
pp=head;
```

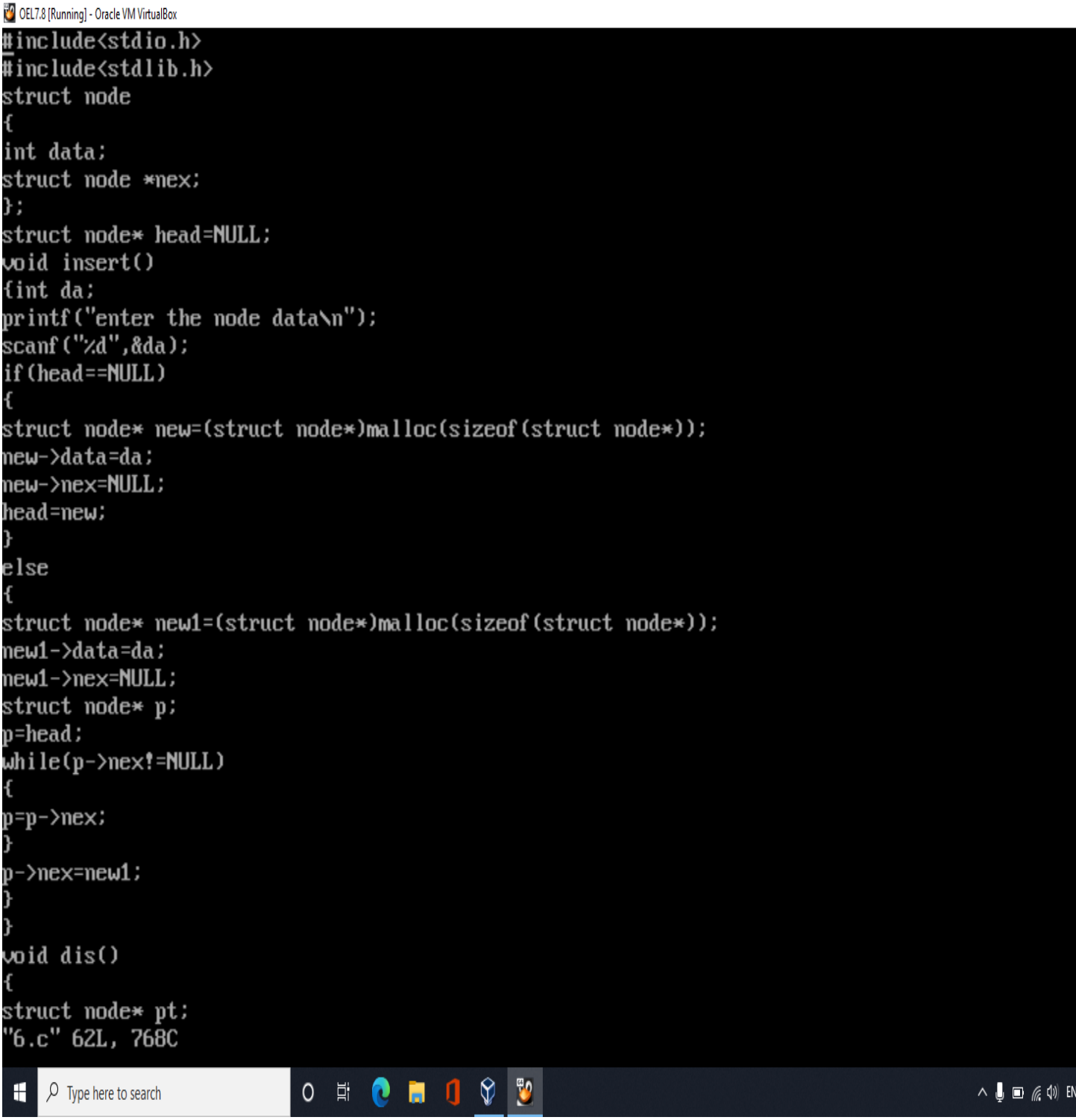
OEL7.8 [Running] - Oracle VM VirtualBox

```
}
pt1=pt1->nex;
pt->nex=new2;
new2->nex=pt1;
}
}
void dis()
{
struct node* pp;
pp=head;
while(pp!=NULL)
{
printf("%d\n",pp->data);
pp=pp->nex;
}
}
int main()
{int c;
while(1)
{
printf("1.insert\t 2.insert at position\t 3.display\n");
scanf("%d",&c);
switch(c)
{
case 1:insert();
       break;
case 2:inp();
       break;
case 3:dis();
       break;
default:exit(0);
}
}
return 0;
}
```

OEL7.8 [Running] - Oracle VM VirtualBox

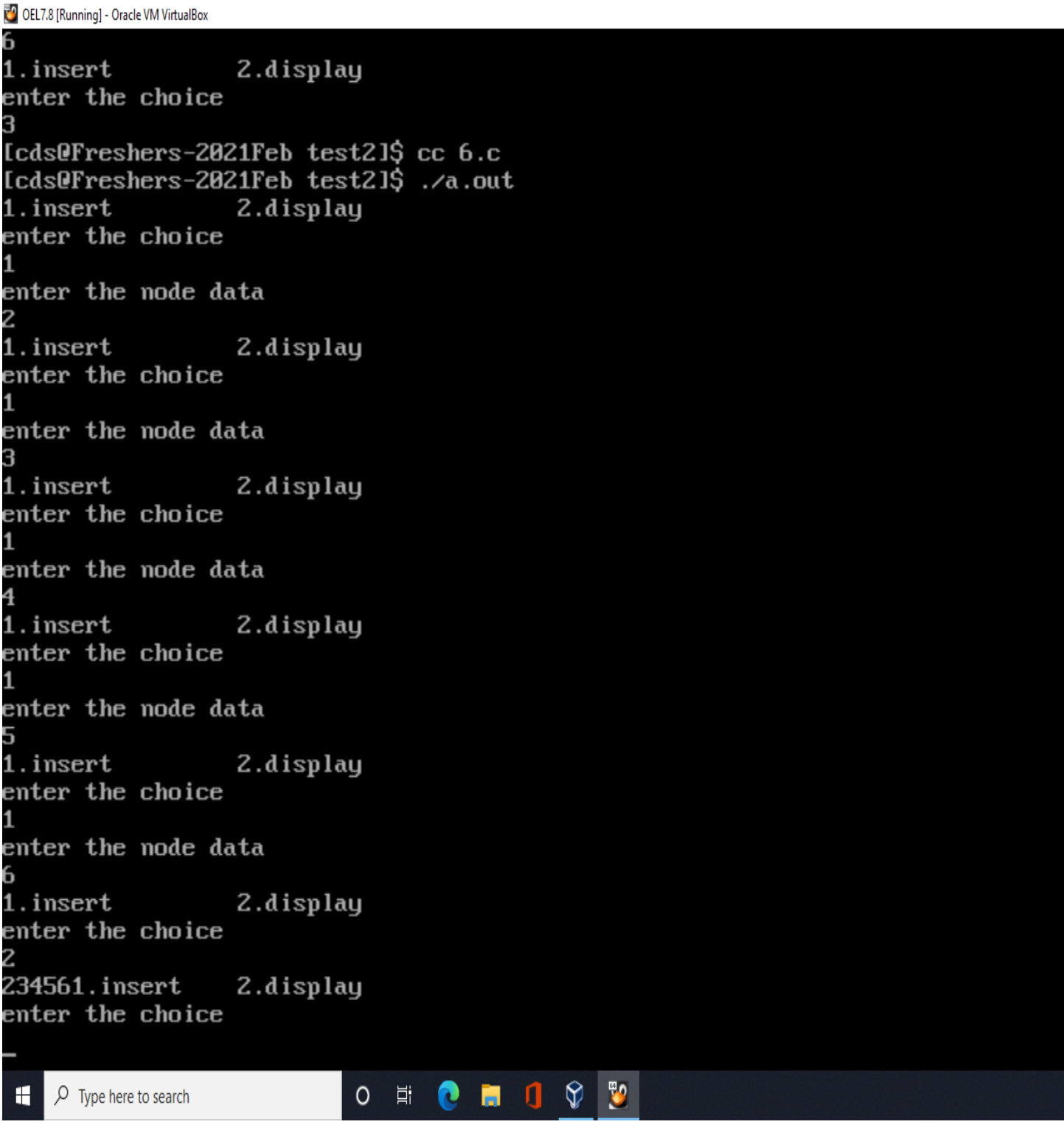
```
printf("1.insert\t 2.insert at position\t 3.display\n");
scanf("%d",&c);
switch(c)
"5.c" 96L, 1193C written
[cds@Freshers-2021Feb test2]$ cc 5.c
[cds@Freshers-2021Feb test2]$ ./a.out
1.insert         2.insert at position    3.display
1
enter the data
2
1.insert         2.insert at position    3.display
1
enter the data
3
1.insert         2.insert at position    3.display
1
enter the data
4
1.insert         2.insert at position    3.display
1
enter the data
5
1.insert         2.insert at position    3.display
2
enter the data
8
enter the position
2
1.insert         2.insert at position    3.display
3
2
3
4
8
5
1.insert         2.insert at position    3.display
```

4)Write a C program to create and insert node at the end of the linked list.



OEL7.8 [Running] - Oracle VM VirtualBox

```
while(p->nex!=NULL)
{
p=p->nex;
}
p->nex=new1;
}
}
void dis()
{
struct node* pt;
pt=head;
while(pt!=NULL)
{
printf("%d",pt->data);
pt=pt->nex;
}
}
int main()
{
int c;
while(1)
{
printf("1.insert \t 2.dis");
printf("enter the choice\n");
scanf("%d",&c);
switch(c)
{
case 1:insert();
        break;
case 2:dis();
        break;
default:exit(0);
}
}
return 0;
}
```


OEL7.8 [Running] - Oracle VM VirtualBox
6
1.insert 2.display
enter the choice
3
[cds@Freshers-2021Feb test2]$ cc 6.c
[cds@Freshers-2021Feb test2]$ ./a.out
1.insert 2.display
enter the choice
1
enter the node data
2
1.insert 2.display
enter the choice
1
enter the node data
3
1.insert 2.display
enter the choice
1
enter the node data
4
1.insert 2.display
enter the choice
1
enter the node data
5
1.insert 2.display
enter the choice
1
enter the node data
6
1.insert 2.display
enter the choice
2
234561.insert 2.display
enter the choice
Type here to search