BHARATI VIDYAPEETH'S COLLEGE OF ENGINEERING

A-4, PASCHIM VIHAR, NEW DELHI - 110063

CERTIFICATE

This is to Certify that Mr./Miss Varun Verma

Roll No. 0 2 2 1 1 5 0 4 9 1 9 Branch: EEE

has satisfactorily completed his / her terms work in

Data Structures LAB subject

Head of the Department Date Professor Incharge

INDEX

NAME : Varun Verma

Roll.No. 0 2 2 1 1 5 0 4 9 1 9

EXPT. NO.	NAME OF THE EXPERIMENT	DATE OF PERFORMANCE	DATE OF SUBMISSION	REMARKS
1	Write a menu driven program to implement linear and binary search			
2	Write a menu driven program to insert and delete element from Array			
3	Write a program to insert, delete and display a singly linked list			
4	Write a program to implement A doubly linked list			
5	Write a program to implement a circular linked list			
6	Write a program to implement stacks as (i) Arrays (ii) Linked list			
7	Write a program to implement queue as (i) Arrays (ii) linked list			
8	Program to convert infix expression to postfix expressions			
9				
10				
11				
12				
Any Additional individual work done by students.				
1	Write a program to reverse elements in stack using Recursion			
2	Write a program to count the no. of nodes in a Binary search tree			
3				

Varun Verma

02211504919

EEE

EXPERIMENT – 10

Content Beyond Syllabus

AIM: Write a C program to Count the number of nodes in a binary search tree

SOURCE CODE:

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

struct node
{
	struct node *lchild;
	int info;
	struct node *rchild;
};


struct node *insert(struct node *ptr, int ikey);
void display(struct node *ptr,int level);
int NodesAtLevel(struct node *ptr, int level) ;

int main()
{
	struct node *root=NULL,*root1=NULL,*ptr;
	int choice,k,item,level;

	while(1)
	{
		printf("\nSelect operation to be done on tree: \n");
		printf(" 1.Insert Element in tree \n");
		printf(" 2.Display Tree \n");
		printf(" 3.Count Number of Nodes \n");
		printf(" 4.Exit\n");
		printf("\n Enter Your Choice : ");
		scanf("%d",&choice);

		switch(choice)
		{

		case 1:
```

```
                printf("\n Enter the value to be inserted : ");
                scanf("%d",&k);
                root = insert(root, k);
                break;

        case 2:
           printf("\n");
           display(root,0);
           printf("\n");
           break;

        case 3:
           printf("\n");
           printf(" Enter any level : ");
           scanf("%d",&level);
           printf("\n Number of nodes at [ %d ] Level : %d\n",level,NodesAtLevel(root,level));
           break;

        case 4:
                exit(1);

            default:
                printf("\n Wrong Choice\n");

           }/*End of switch */
        }/*End of while */

        return 0;

}/*End of main( )*/


struct node *insert(struct node *ptr, int ikey )
{
        if(ptr==NULL)
        {
                ptr = (struct node *) malloc(sizeof(struct node));
                ptr->info = ikey;
                ptr->lchild = NULL;
                ptr->rchild = NULL;
        }
        else if(ikey < ptr->info) /*Insertion in left subtree*/
                ptr->lchild = insert(ptr->lchild, ikey);
        else if(ikey > ptr->info) /*Insertion in right subtree */
                ptr->rchild = insert(ptr->rchild, ikey);
        else
                printf("\n Duplicate Key\n");
        return(ptr);
}/*End of insert( )*/
```

```
void display(struct node *ptr,int level)
{
	int i;
	if(ptr == NULL )/*Base Case*/
		return;
	else
    {
		display(ptr->rchild, level+1);
		printf("\n");
		for (i=0; i<level; i++)
			printf("    ");
		printf("%d", ptr->info);
		display(ptr->lchild, level+1);
	}
}/*End of display()*/


int NodesAtLevel(struct node *ptr, int level)
{
	if(ptr==NULL)
		return 0;
	if(level==0)
		return 1;
	return NodesAtLevel(ptr->lchild,level-1) + NodesAtLevel(ptr->rchild,level-1);
}/*End of NodesAtLevel()*/
```

OUTPUT:

i) Menu and binary search tree creation

```
Select operation to be done on tree:
 1.Insert Element in tree
 2.Display Tree
 3.Count Number of Nodes
 4.Exit

 Enter Your Choice : 1

 Enter the value to be inserted : 5
```

```
Enter Your Choice : 1

Enter the key to be inserted : 3
```

```
Enter Your Choice : 1

Enter the key to be inserted : 6
```

```
Enter Your Choice : 1

Enter the key to be inserted : 9
```

ii) Displaying Tree

```
 Enter Your Choice : 2


        9
    6
5
    3
```

iii) Counting Nodes

```
Enter Your Choice : 3

Enter any level : 1

Number of nodes at [ 1 ] Level : 2
```

```
Enter Your Choice : 3

Enter any level : 2

Number of nodes at [ 2 ] Level : 1
```

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CONTENT BEYOND SYLLABUS

Aim: Write a C program to reverse elements in the stack using recursion.

```
#include "stdio.h"
#include "stdlib.h"
#include "string.h"
struct node{
    int data;
    struct node *next;
};

void push(struct node **head,int value) {
    struct node *temp=(struct node*)malloc(sizeof(struct node));
    if(temp==NULL) {
            printf("\t\tInsufficient memory\n");
            return ;
    }
    temp->data=value;
    temp->next=*head;

    *head = temp;

    return;

}

int pop(struct node **head) {
    int element;
    struct node *temp=*head;
    if (*head == NULL) {
            printf("\t\tStack empty\n");
            return;
    }
    else {
            element=temp->data;
            *head=temp->next;
            free(temp);
            return element;
    }

}
int isEmpty(struct node *head) {
```

```
    if(head==NULL)
        return 1;
    else
        return 0;
}

void reverse(struct node **head) {
    if(!isEmpty(*head)) {
        int temp=pop(head);
        reverse(head);
        insertAtBottom(head,temp);
    }
}

void insertAtBottom(struct node **head,int value)
{
    if(isEmpty(*head)) {
        //printf("Empty stack: %d\n",value);
        push(head,value);
    }
    else {
        int temp=pop(head);
        insertAtBottom(head,value);
        push(head,temp);
    }
}

void display(struct node *head)
{
    struct node *temp=head;
    while(temp!=NULL) {
        printf("\t%d ", temp->data);
        temp=temp->next;
    }
    printf("\n");

}

// --------------------------------PARTITION_FOR_LESS_CONFUSION-----------------------------


int main() {
    struct node *stack=NULL;
    int value,test,answer,choice;
    printf("\n  _____REVERSE_STACK_ELEMENTS_____
_____\n");

    printf("  Press 1 to Push \n  Enter 2 to Reverse\n  Enter 3 to Display\n  Enter 4 to Exit\n");
    while(1) {
        printf("\n         Enter your choice: ");
        scanf("%d",&choice);
        switch(choice) {
            case 1:
                printf("\tEnter number to insert: ");
```

```
                scanf("%d",&value);
                push(&stack, value);
                break;
            case 2:
                reverse(&stack);
                printf("\tReversed.\n");
                break;
            case 3:
                display(stack);
                break;
            case 4:
                exit(0);
                break;
            default:
                printf("\tWrong choice\n");
                break;
        }
    }
}
```

OUTPUT

```
_____________________REVERSE_STACK_ELEMENTS_____________________
Press 1 to Push
Enter 2 to Reverse
Enter 3 to Display
Enter 4 to Exit

  Enter your choice: 1
      Enter number to insert: 1

  Enter your choice: 1
      Enter number to insert: 34

  Enter your choice: 1
      Enter number to insert: 4373563

  Enter your choice: 33
      Wrong choice

  Enter your choice: 3
      4373563         34      1

  Enter your choice: 2
      Reversed.

  Enter your choice: 3
      1       34      4373563

  Enter your choice: 4


...Program finished with exit code 0
Press ENTER to exit console.
```

Experiment 8

Aim: -Write a program to convert Infix to postfix

Name: - Varun Verma

Branch: -EEE

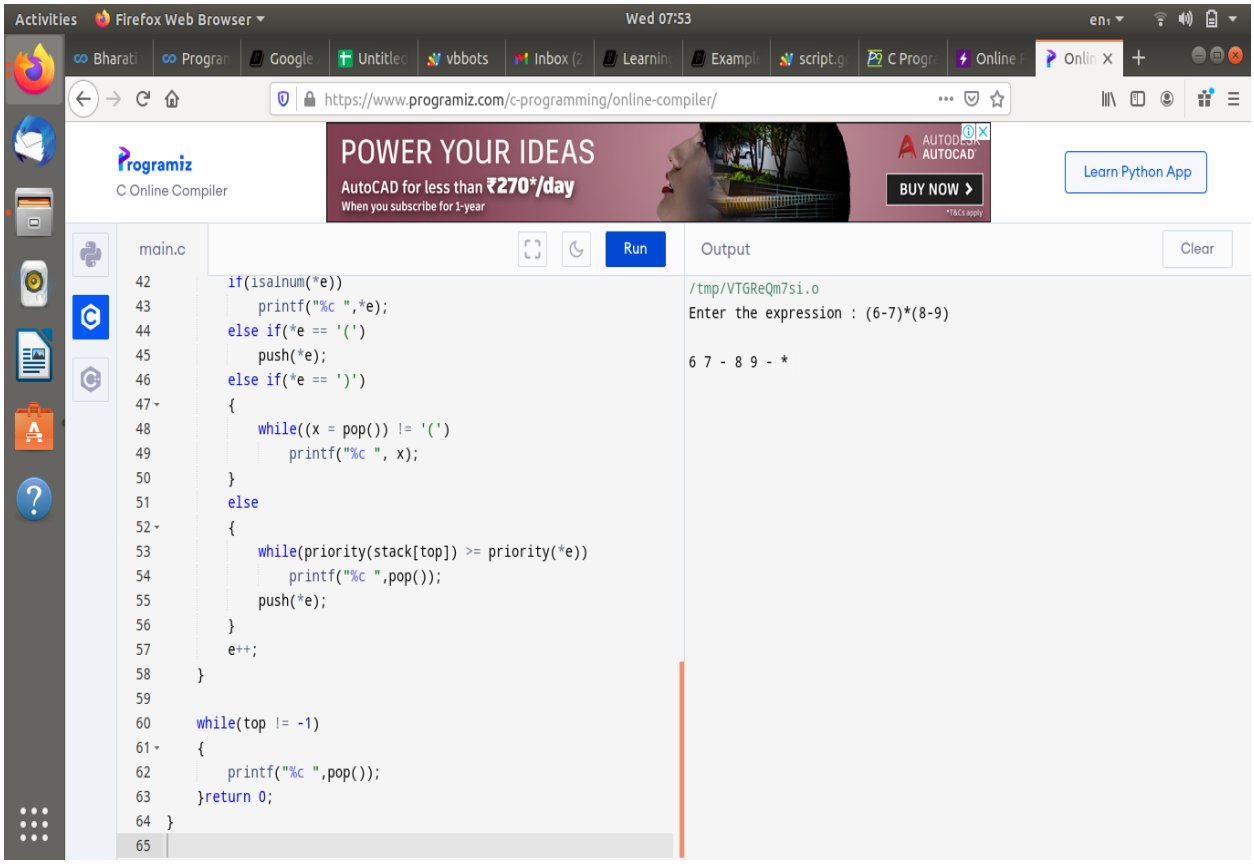
Roll number: - 02211504919

Source code: -

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

char stack[100];
int top = -1;

void push(char x)
{
   stack[++top] = x;
}

char pop()
{
   if(top == -1)
      return -1;
   else
      return stack[top--];
}

int priority(char x)
{
   if(x == '(')
      return 0;
   if(x == '+' || x == '-')
      return 1;
   if(x == '*' || x == '/')
      return 2;
   return 0;
}

int main()
{
   char exp[100];
   char *e, x;
```

```
    printf("Enter the expression : ");
    scanf("%s",exp);
    printf("\n");
    e = exp;

    while(*e != '\0')
    {
        if(isalnum(*e))
            printf("%c ",*e);
        else if(*e == '(')
            push(*e);
        else if(*e == ')')
        {
            while((x = pop()) != '(')
                printf("%c ", x);
        }
        else
        {
            while(priority(stack[top]) >= priority(*e))
                printf("%c ",pop());
            push(*e);
        }
        e++;
    }

    while(top != -1)
    {
        printf("%c ",pop());
    }return 0;
}
```

Screen shot: -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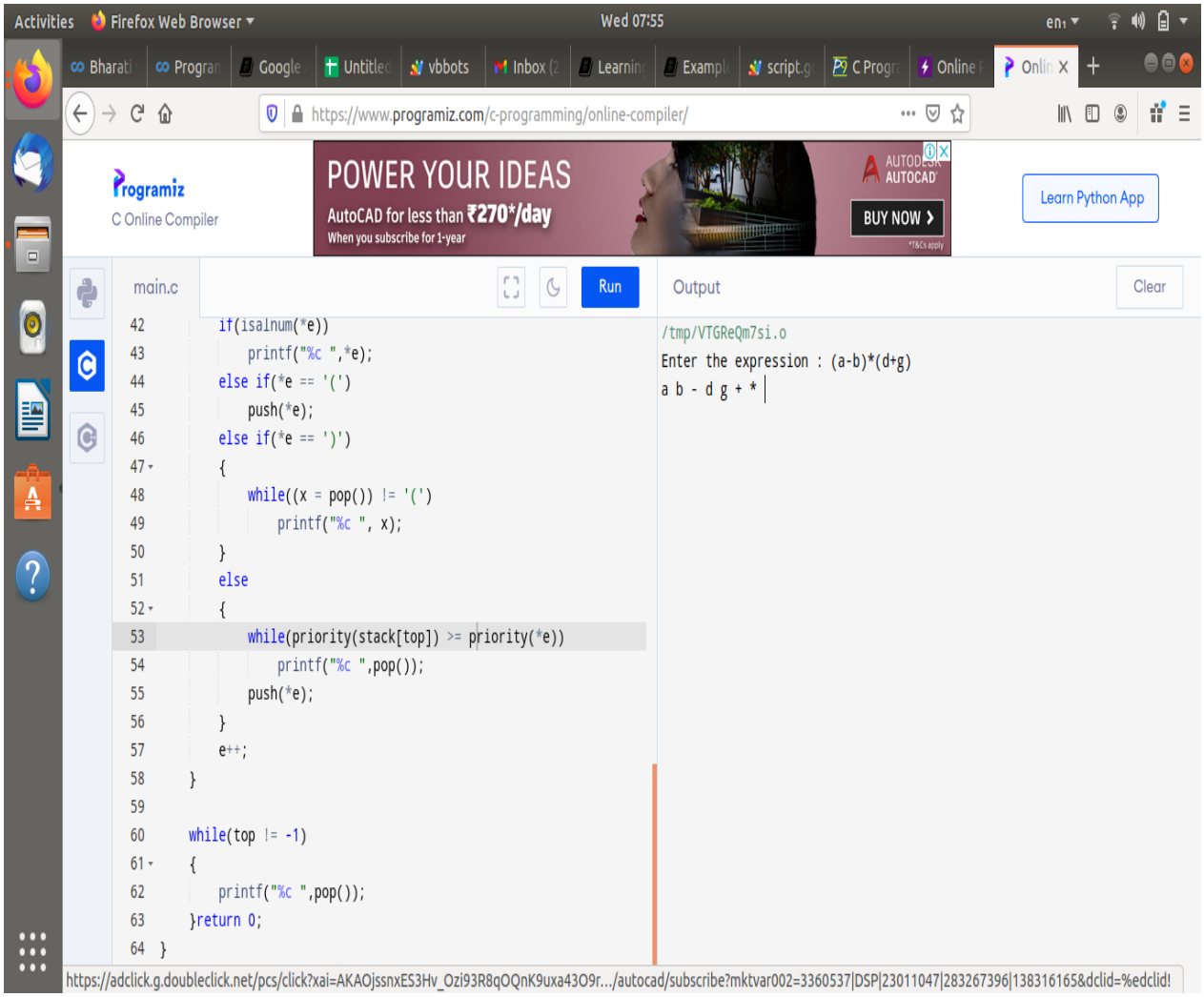
main.c
Run
Output
Clear
42 if(isalnum(*e))
43 printf("%c ",*e);
44 else if(*e == '(')
45 push(*e);
46 else if(*e == ')')
47 {
48 while((x = pop()) != '(')
49 printf("%c ", x);
50 }
51 else
52 {
53 while(priority(stack[top]) >= priority(*e))
54 printf("%c ",pop());
55 push(*e);
56 }
57 e++;
58 }
59
60 while(top != -1)
61 {
62 printf("%c ",pop());
63 }return 0;
64 }
65
/tmp/VTGReQm7si.o
Enter the expression : (6-7)*(8-9)
6 7 - 8 9 - *




```
42      if(isalnum(*e))
43          printf("%c ",*e);
44      else if(*e == '(')
45          push(*e);
46      else if(*e == ')')
47      {
48          while((x = pop()) != '(')
49              printf("%c ", x);
50      }
51      else
52      {
53          while(priority(stack[top]) >= priority(*e))
54              printf("%c ",pop());
55          push(*e);
56      }
57      e++;
58  }
59
60  while(top != -1)
61  {
62      printf("%c ",pop());
63  }return 0;
64 }
```

EXPERIMENT:-7

NAME:- VARUN VERMA
ROLL NUMBER:- 02211504919

Aim :- Write a program to implement queue

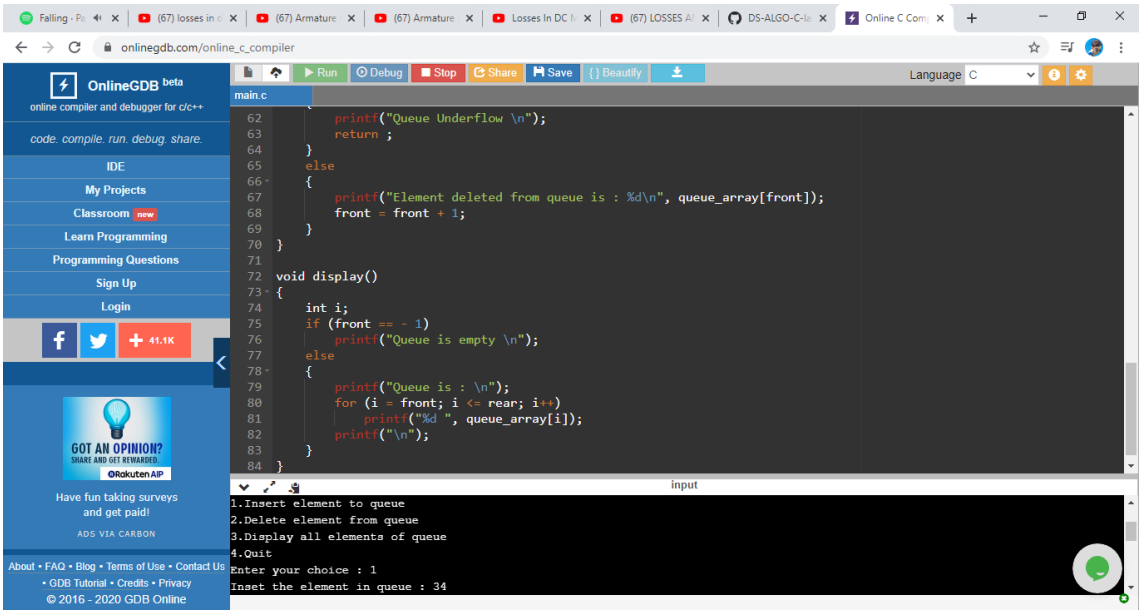
Using array:

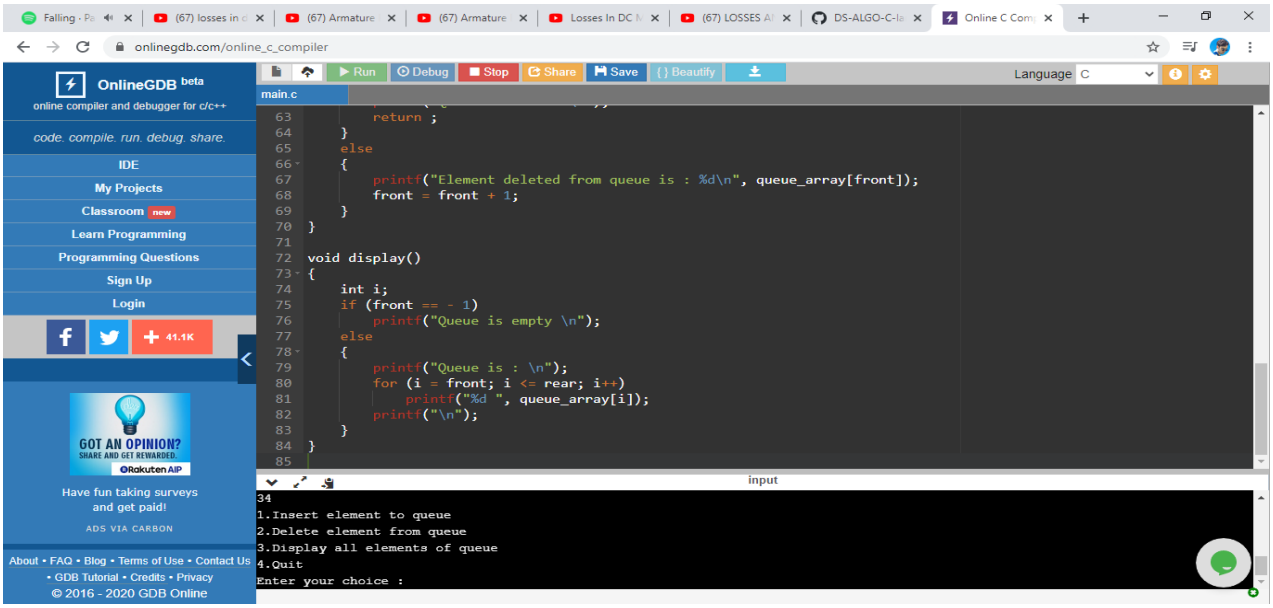
```
#include
<stdio.h>

            #define MAX 50

            void insert();
            void delete();
            void display();
            int queue_array[MAX];
            int rear = - 1;
            int front = - 1;
            main()
            {
                int choice;
                while (1)
                {
                    printf("1.Insert element to queue \n");
                    printf("2.Delete element from queue \n");
                    printf("3.Display all elements of queue \n");
                    printf("4.Quit \n");
                    printf("Enter your choice : ");
                    scanf("%d", &choice);
                    switch (choice)
                    {
                        case 1:
                        insert();
                        break;
                        case 2:
                        delete();
                        break;
```

```
            case 3:
            display();
            break;
            case 4:
            exit(1);
            default:
            printf("Wrong choice \n");
        }
    }
}

void insert()
{
    int add_item;
    if (rear == MAX - 1)
    printf("Queue Overflow \n");
    else
    {
        if (front == - 1)

        front = 0;
        printf("Inset the element in queue : ");
        scanf("%d", &add_item);
        rear = rear + 1;
        queue_array[rear] = add_item;
    }
}

void delete()
{
    if (front == - 1 || front > rear)
    {
        printf("Queue Underflow \n");
        return ;
    }
    else
    {
        printf("Element deleted from queue is : %d\n", queue_array[front]);
        front = front + 1;
    }
}

void display()
```

```
{
    int i;
    if (front == - 1)
        printf("Queue is empty \n");
    else
    {
        printf("Queue is : \n");
        for (i = front; i <= rear; i++)
            printf("%d ", queue_array[i]);
        printf("\n");
    }
}
```

SCREEN SHOT:-

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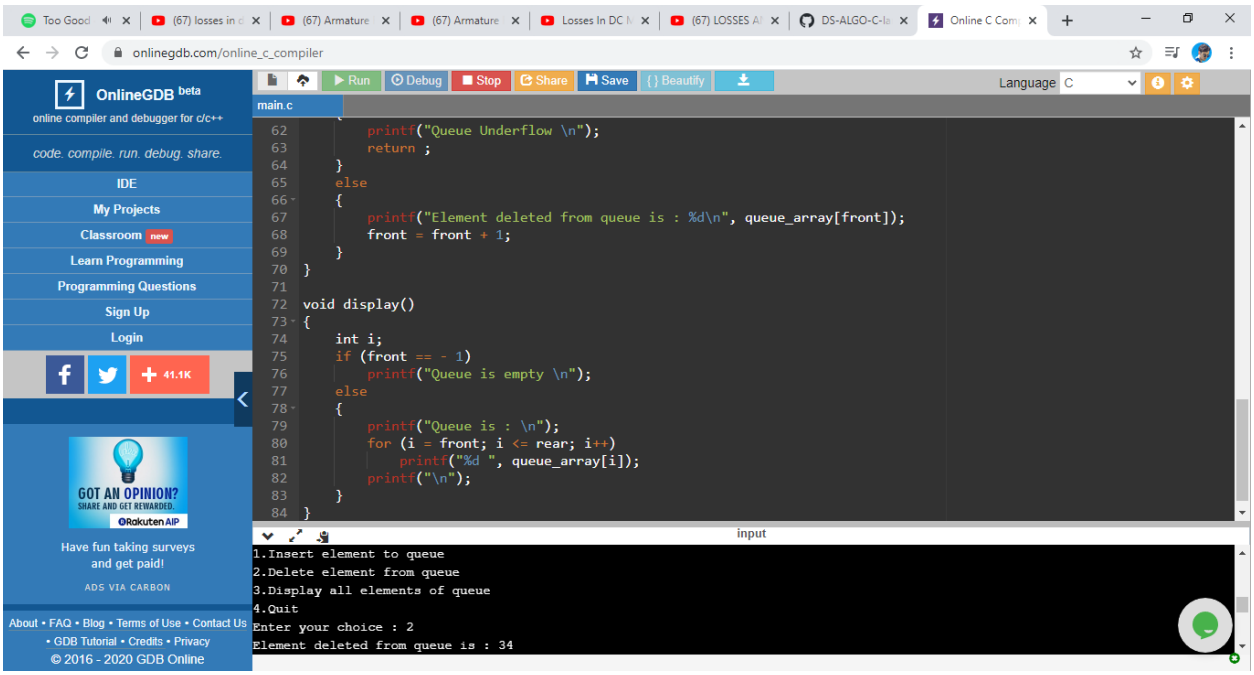
{ } Beautify
Language C
main.c
63 return ;
64 }
65 else
66 {
67 printf("Element deleted from queue is : %d\n", queue_array[front]);
68 front = front + 1;
69 }
70 }
71
72 void display()
73 {
74 int i;
75 if (front == - 1)
76 printf("Queue is empty \n");
77 else
78 {
79 printf("Queue is : \n");
80 for (i = front; i <= rear; i++)
81 printf("%d ", queue_array[i]);
82 printf("\n");
83 }
84 }
85
input
34
1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit
Enter your choice :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{ } Beautify
Language C
main.c
62 printf("Queue Underflow \n");
63 return ;
64 }
65 else
66 {
67 printf("Element deleted from queue is : %d\n", queue_array[front]);
68 front = front + 1;
69 }
70 }
71
72 void display()
73 {
74 int i;
75 if (front == - 1)
76 printf("Queue is empty \n");
77 else
78 {
79 printf("Queue is : \n");
80 for (i = front; i <= rear; i++)
81 printf("%d ", queue_array[i]);
82 printf("\n");
83 }
84 }
input
1.Insert element to queue
2.Delete element from queue
3.Display all elements of queue
4.Quit
Enter your choice : 2
Element deleted from queue is : 34

Using linked list:-

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

            struct node
            {
                int info;
                struct node *ptr;
            }*front,*rear,*temp,*front1;

            int frontelement();
            void enq(int data);
            void deq();
            void empty();
            void display();
            void create();
            void queuesize();

            int count = 0;

            void main()
            {
                int no, ch, e;

                printf("\n 1 - Enque");
                printf("\n 2 - Deque");
                printf("\n 3 - Front element");
                printf("\n 4 - Empty");
                printf("\n 5 - Exit");
                printf("\n 6 - Display");
                printf("\n 7 - Queue size");
                create();
                while (1)
                {
                    printf("\n Enter choice : ");
                    scanf("%d", &ch);
                    switch (ch)
```

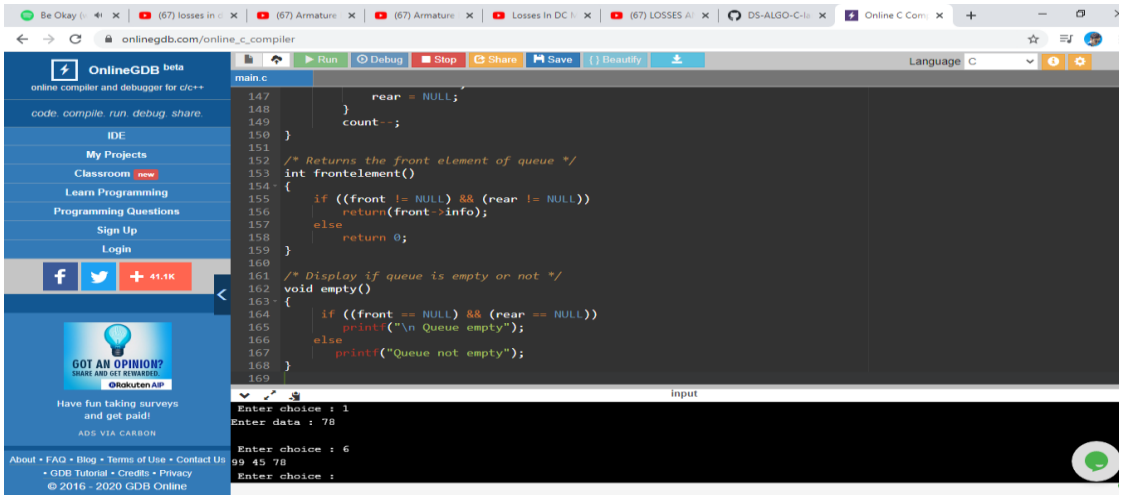
```
        {
        case 1:
            printf("Enter data : ");
            scanf("%d", &no);
            enq(no);
            break;
        case 2:
            deq();
            break;
        case 3:
            e = frontelement();
            if (e != 0)
                printf("Front element : %d", e);
            else
                printf("\n No front element in Queue as queue is empty");
            break;
        case 4:
            empty();
            break;
        case 5:
            exit(0);
        case 6:
            display();
            break;
        case 7:
            queuesize();
            break;
        default:
            printf("Wrong choice, Please enter correct choice  ");
            break;
        }
    }
}

/* Create an empty queue */
void create()
{
    front = rear = NULL;
}

/* Returns queue size */
void queuesize()
{
```

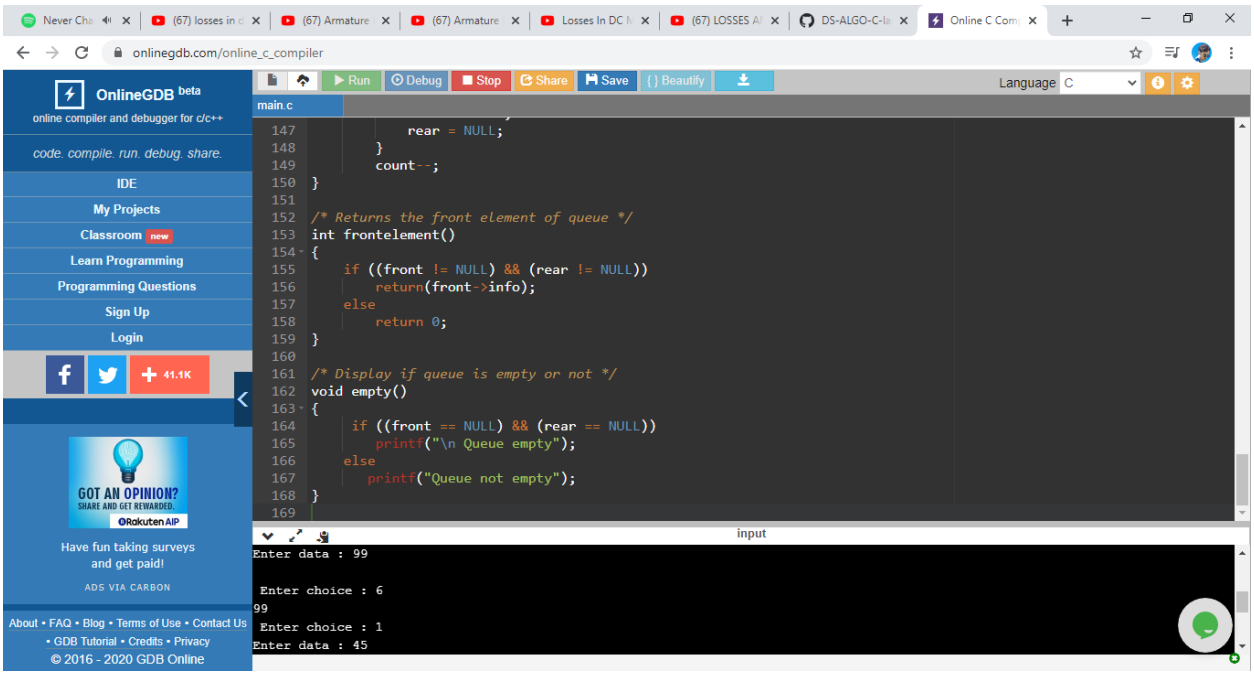
```
    printf("\n Queue size : %d", count);
}

/* Enqueing the queue */
void enq(int data)
{
    if (rear == NULL)
    {
        rear = (struct node *)malloc(1*sizeof(struct node));
        rear->ptr = NULL;
        rear->info = data;
        front = rear;
    }
    else
    {
        temp=(struct node *)malloc(1*sizeof(struct node));
        rear->ptr = temp;
        temp->info = data;
        temp->ptr = NULL;

        rear = temp;
    }
    count++;
}

/* Displaying the queue elements */
void display()
{
    front1 = front;

    if ((front1 == NULL) && (rear == NULL))
    {
        printf("Queue is empty");
        return;
    }
    while (front1 != rear)
    {
        printf("%d ", front1->info);
        front1 = front1->ptr;
    }
    if (front1 == rear)
        printf("%d", front1->info);
}
```

```c
/* Dequeing the queue */
void deq()
{
    front1 = front;

    if (front1 == NULL)
    {
        printf("\n Error: Trying to display elements from empty queue");
        return;
    }
    else
        if (front1->ptr != NULL)
        {
            front1 = front1->ptr;
            printf("\n Dequed value : %d", front->info);
            free(front);
            front = front1;
        }
        else
        {
            printf("\n Dequed value : %d", front->info);
            free(front);
            front = NULL;
            rear = NULL;
        }
        count--;
}

/* Returns the front element of queue */
int frontelement()
{
    if ((front != NULL) && (rear != NULL))
        return(front->info);
    else
        return 0;
}

/* Display if queue is empty or not */
void empty()
{
     if ((front == NULL) && (rear == NULL))
        printf("\n Queue empty");
```

```
    else
        printf("Queue not empty");
}
```

Screen shot:

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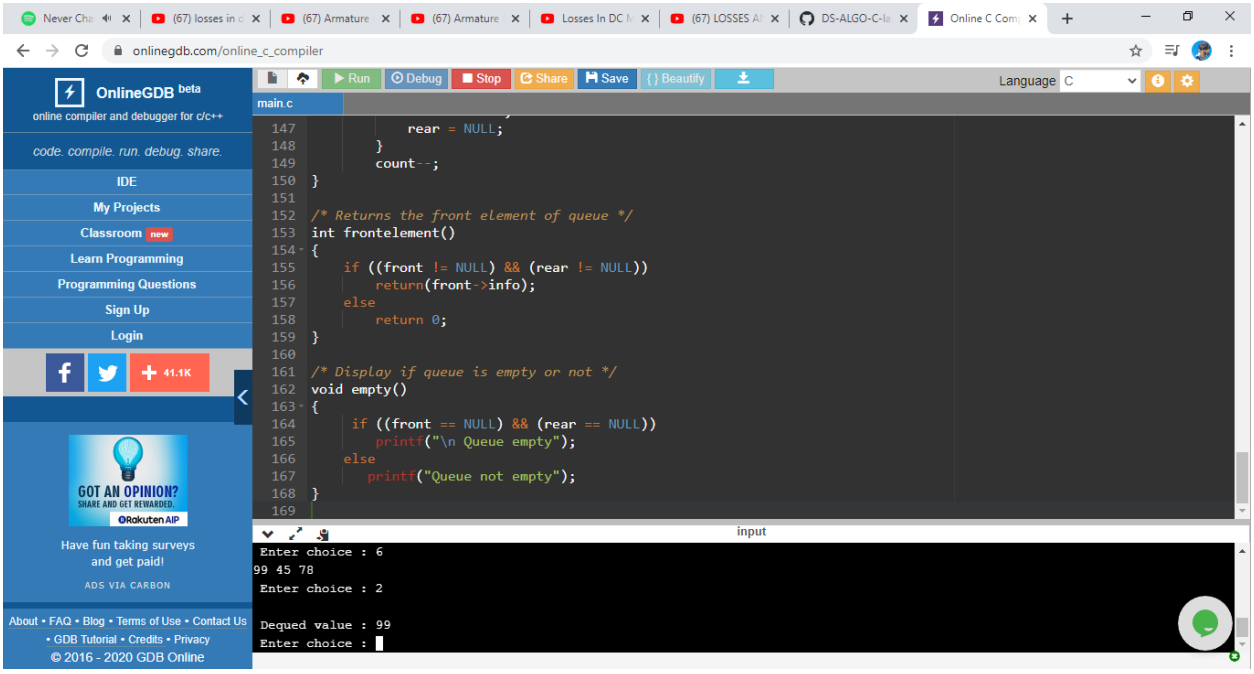
Stop
Share
Save
{ } Beautify
Language C
main.c
147 rear = NULL;
148 }
149 count--;
150 }
151
152 /* Returns the front element of queue */
153 int frontelement()
154 {
155 if ((front != NULL) && (rear != NULL))
156 return(front->info);
157 else
158 return 0;
159 }
160
161 /* Display if queue is empty or not */
162 void empty()
163 {
164 if ((front == NULL) && (rear == NULL))
165 printf("\n Queue empty");
166 else
167 printf("Queue not empty");
168 }
169
input
Enter data : 99
Enter choice : 6
99
Enter choice : 1
Enter data : 45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148 }
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150 }
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154 {
155 if ((front != NULL) && (rear != NULL))
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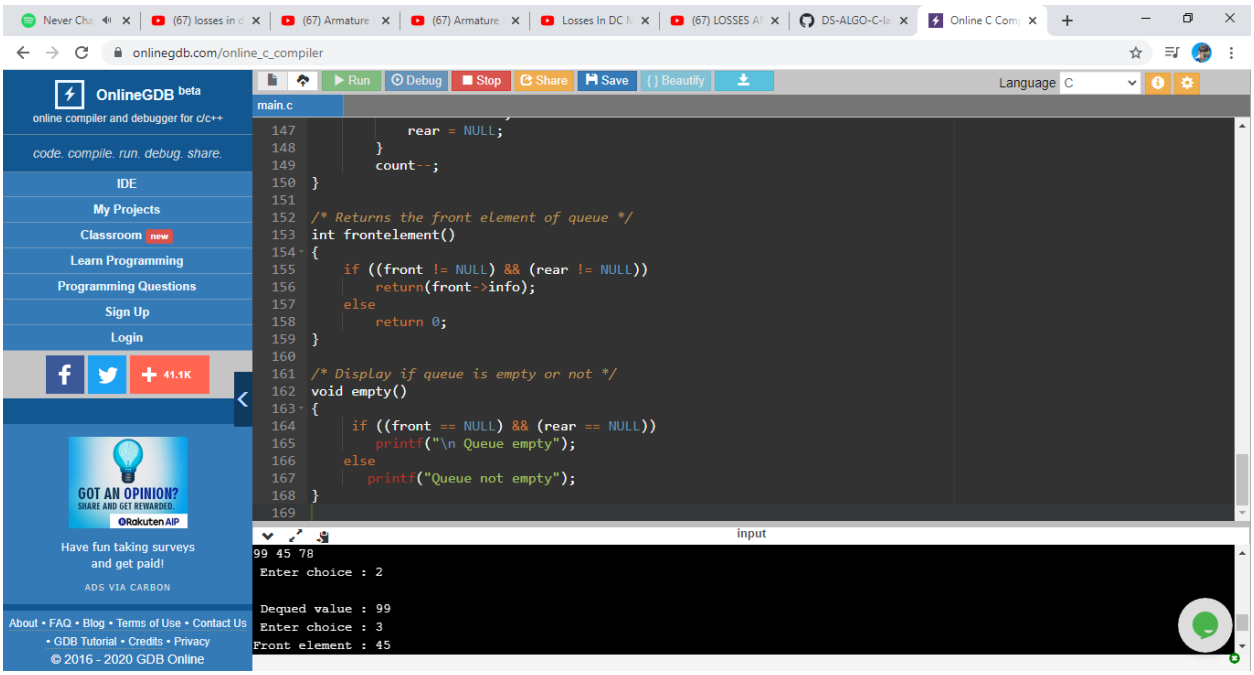
157 else
158 return 0;
159 }
160
161 /* Display if queue is empty or not */
162 void empty()
163 {
164 if ((front == NULL) && (rear == NULL))
165 printf("\n Queue empty");
166 else
167 printf("Queue not empty");
168 }
169
input
Enter choice : 6
99 45 78
Enter choice : 2
Dequed value : 99
Enter choice :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{ } Beautify
Language C
main.c
147 rear = NULL;
148 }
149 count--;
150 }
151
152 /* Returns the front element of queue */
153 int frontelement()
154 {
155 if ((front != NULL) && (rear != NULL))
156 return(front->info);
157 else
158 return 0;
159 }
160
161 /* Display if queue is empty or not */
162 void empty()
163 {
164 if ((front == NULL) && (rear == NULL))
165 printf("\n Queue empty");
166 else
167 printf("Queue not empty");
168 }
169
input
99 45 78
Enter choice : 2
Dequed value : 99
Enter choice : 3
Front element : 45

NAME :- Varun Verma

Branch: - EEE

Roll no. : - 02211504919

AIM:- Write a program to implement Circular linked list

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

void beginsert ();
void lastinsert ();
void randominsert();
void begin_delete();
void last_delete();
void random_delete();
void display();
void search();
void main ()
{
```

```
int choice =0;
while(choice != 7)
{
    printf("\n*********Main Menu*********\n");
    printf("\nChoose one option from the following list ...\n");
    printf("\n===============================================\n");
    printf("\n1.Insert in begining\n2.Insert at last\n3.Delete from Beginning\n4.Delete from
last\n5.Search for an element\n6.Show\n7.Exit\n");
    printf("\nEnter your choice?\n");
    scanf("\n%d",&choice);
    switch(choice)
    {
      case 1:
      beginsert();
      break;
      case 2:
      lastinsert();
      break;
      case 3:
      begin_delete();
      break;
      case 4:
      last_delete();
      break;
      case 5:
      search();
      break;
      case 6:
      display();
      break;
      case 7:
```

```
            exit(0);
            break;
            default:
            printf("Please enter valid choice..");
        }
    }
}
void beginsert()
{
    struct node *ptr,*temp;
    int item;
    ptr = (struct node *)malloc(sizeof(struct node));
    if(ptr == NULL)
    {
        printf("\nOVERFLOW");
    }
    else
    {
        printf("\nEnter the node data?");
        scanf("%d",&item);
        ptr -> data = item;
        if(head == NULL)
        {
            head = ptr;
            ptr -> next = head;
        }
        else
        {
            temp = head;
            while(temp->next != head)
                temp = temp->next;
```

```
            ptr->next = head;
            temp -> next = ptr;
            head = ptr;
        }
        printf("\nnode inserted\n");
    }

}
void lastinsert()
{
    struct node *ptr,*temp;
    int item;
    ptr = (struct node *)malloc(sizeof(struct node));
    if(ptr == NULL)
    {
        printf("\nOVERFLOW\n");
    }
    else
    {
        printf("\nEnter Data?");
        scanf("%d",&item);
        ptr->data = item;
        if(head == NULL)
        {
            head = ptr;
            ptr -> next = head;
        }
        else
        {
            temp = head;
            while(temp -> next != head)
```

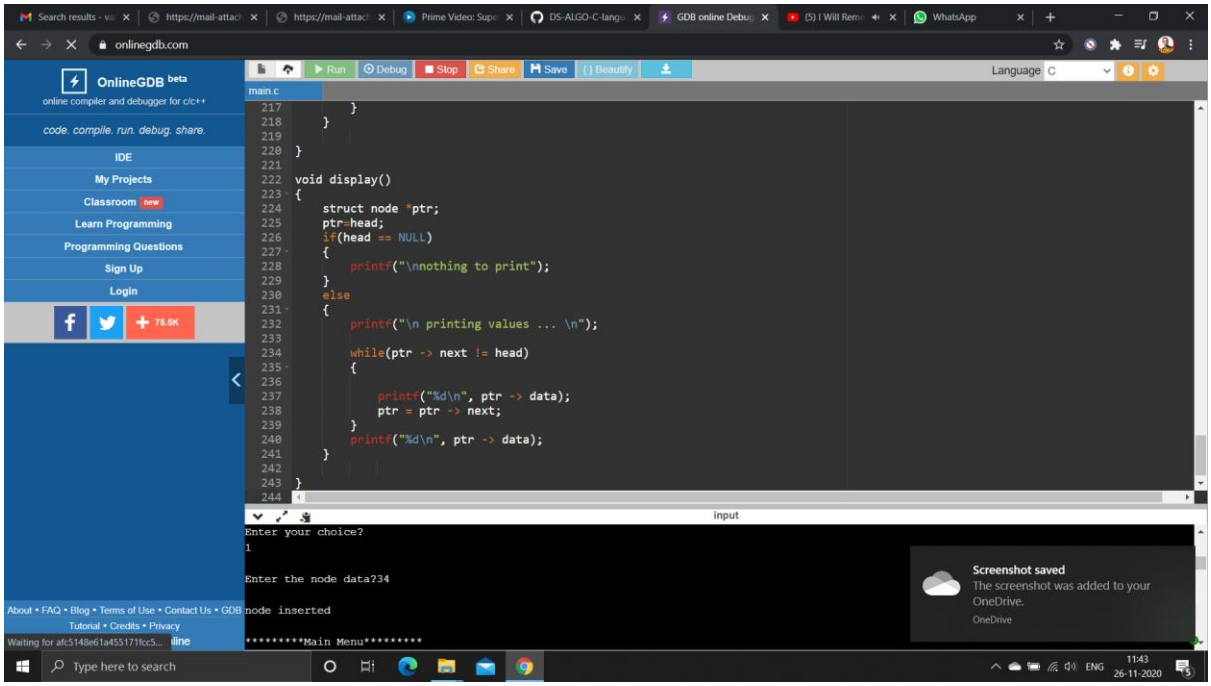
```
        {
            temp = temp -> next;
        }
        temp -> next = ptr;
        ptr -> next = head;
      }

      printf("\nnode inserted\n");
   }

}

void begin_delete()
{
   struct node *ptr;
   if(head == NULL)
   {
      printf("\nUNDERFLOW");
   }
   else if(head->next == head)
   {
      head = NULL;
      free(head);
      printf("\nnode deleted\n");
   }

   else
   {   ptr = head;
      while(ptr -> next != head)
         ptr = ptr -> next;
      ptr->next = head->next;
```

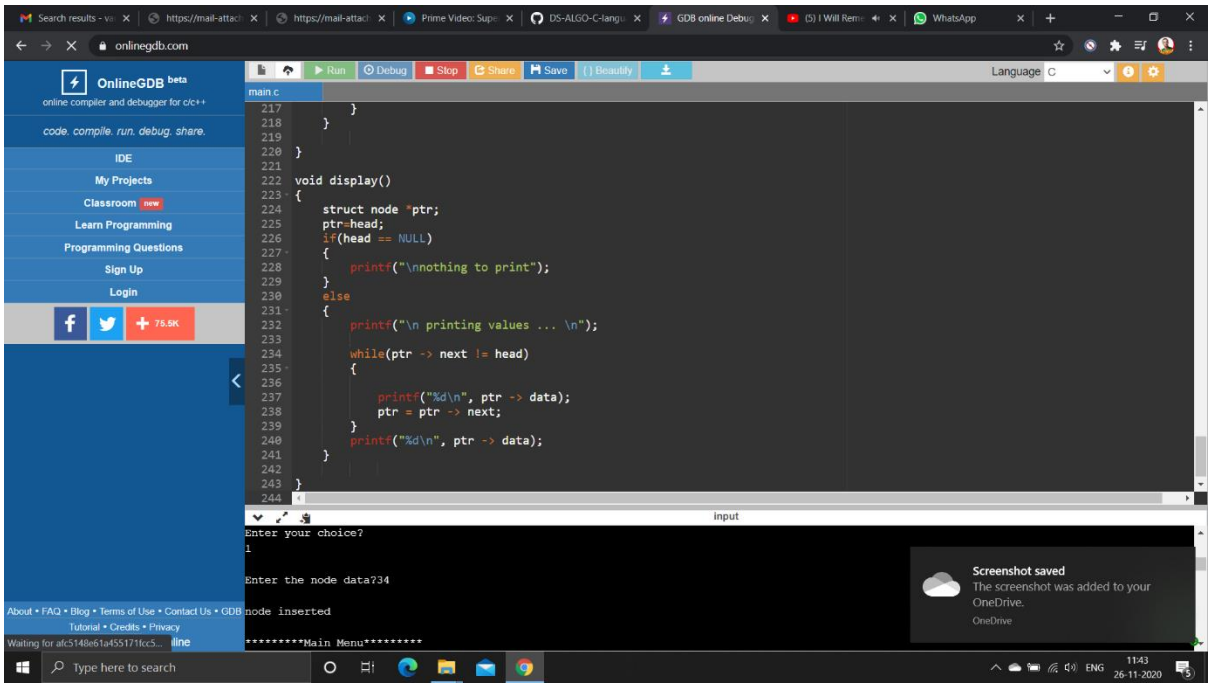
```
        free(head);
        head = ptr->next;
        printf("\nnode deleted\n");

    }
}
void last_delete()
{
    struct node *ptr, *preptr;
    if(head==NULL)
    {
        printf("\nUNDERFLOW");
    }
    else if (head ->next == head)
    {
        head = NULL;
        free(head);
        printf("\nnode deleted\n");

    }
    else
    {
        ptr = head;
        while(ptr ->next != head)
        {
            preptr=ptr;
            ptr = ptr->next;
        }
        preptr->next = ptr -> next;
        free(ptr);
        printf("\nnode deleted\n");
```

```
    }
}

void search()
{
    struct node *ptr;
    int item,i=0,flag=1;
    ptr = head;
    if(ptr == NULL)
    {
        printf("\nEmpty List\n");
    }
    else
    {
        printf("\nEnter item which you want to search?\n");
        scanf("%d",&item);
        if(head ->data == item)
        {
        printf("item found at location %d",i+1);
        flag=0;
        }
        else
        {
        while (ptr->next != head)
        {
            if(ptr->data == item)
            {
                printf("item found at location %d ",i+1);
                flag=0;
                break;
```

```
            }
            else
            {
               flag=1;
            }
            i++;
            ptr = ptr -> next;
         }
         }
         if(flag != 0)
         {
            printf("Item not found\n");
         }
      }

}

void display()
{
   struct node *ptr;
   ptr=head;
   if(head == NULL)
   {
      printf("\nnothing to print");
   }
   else
   {
      printf("\n printing values ... \n");

      while(ptr -> next != head)
      {
```

```
            printf("%d\n", ptr -> data);
            ptr = ptr -> next;
        }
        printf("%d\n", ptr -> data);
    }

}
```

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{ } Beautify
Language C
main.c
}
}
}
void display()
{
struct node *ptr;
ptr=head;
if(head == NULL)
{
printf("\nnothing to print");
}
else
{
printf("\n printing values ... \n");
while(ptr -> next != head)
{
printf("%d\n", ptr -> data);
ptr = ptr -> next;
}
printf("%d\n", ptr -> data);
}
}
input
Enter your choice?
1
Enter the node data?234
node inserted
*********Main Menu*********
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Name: - Varun Verma

EEE

02211504919

Aim:- Write a program to print stack as array and linked list

Source code:-

```
#include <stdio.h>
#define MAX 3 // Altering this value changes size of stack created
int st[MAX], top=-1;
void push(int st[], int val);
int pop(int st[]);
int peek(int st[]);
void display(int st[]);
int main(int argc, char *argv[]) {
int val, option;
do
{
printf("\n *****MAIN MENU*****");
printf("\n 1. PUSH");
printf("\n 2. POP");
printf("\n 3. PEEK");
printf("\n 4. DISPLAY");
printf("\n 5. EXIT");
printf("\n Enter your option: ");
scanf("%d", &option);
switch(option)
{
case 1:
printf("\n Enter the number to be pushed on stack: ");
scanf("%d", &val);
push(st, val);
break;
case 2:
```

```
val = pop(st);
if(val != -1)
printf("\n The value deleted from stack is: %d", val);
break;
case 3:
val = peek(st);
if(val != -1)
printf("\n The value stored at top of stack is: %d", val);
break;
case 4:
display(st);
break;
}
}while(option != 5);
return 0;
}
void push(int st[], int val)
{
if(top == MAX-1)
{
printf("\n STACK OVERFLOW");
}
else
{
top++;
st[top] = val;
}
}
int pop(int st[])
{
int val;
if(top == -1)
{
printf("\n STACK UNDERFLOW");
return -1;
}
else
{
val = st[top];
top--;
return val;
}
}
void display(int st[])
{
int i;
```

```
if(top == -1)
printf("\n STACK IS EMPTY");
else
{
for(i=top;i>=0;i--)
printf("\n %d",st[i]);
printf("\n"); // Added for formatting purposes
}
}
int peek(int st[])
{
if(top == -1)
{
printf("\n STACK IS EMPTY");
return -1;
}
else
return (st[top]);
}
```

Stack as a linked list

```
#include <stdio.h>
#include <stdlib.h>
void push();
void pop();
void display();
struct node
{
int val;
struct node *next;
};
struct node *head;
void main ()
{
int choice=0;
```

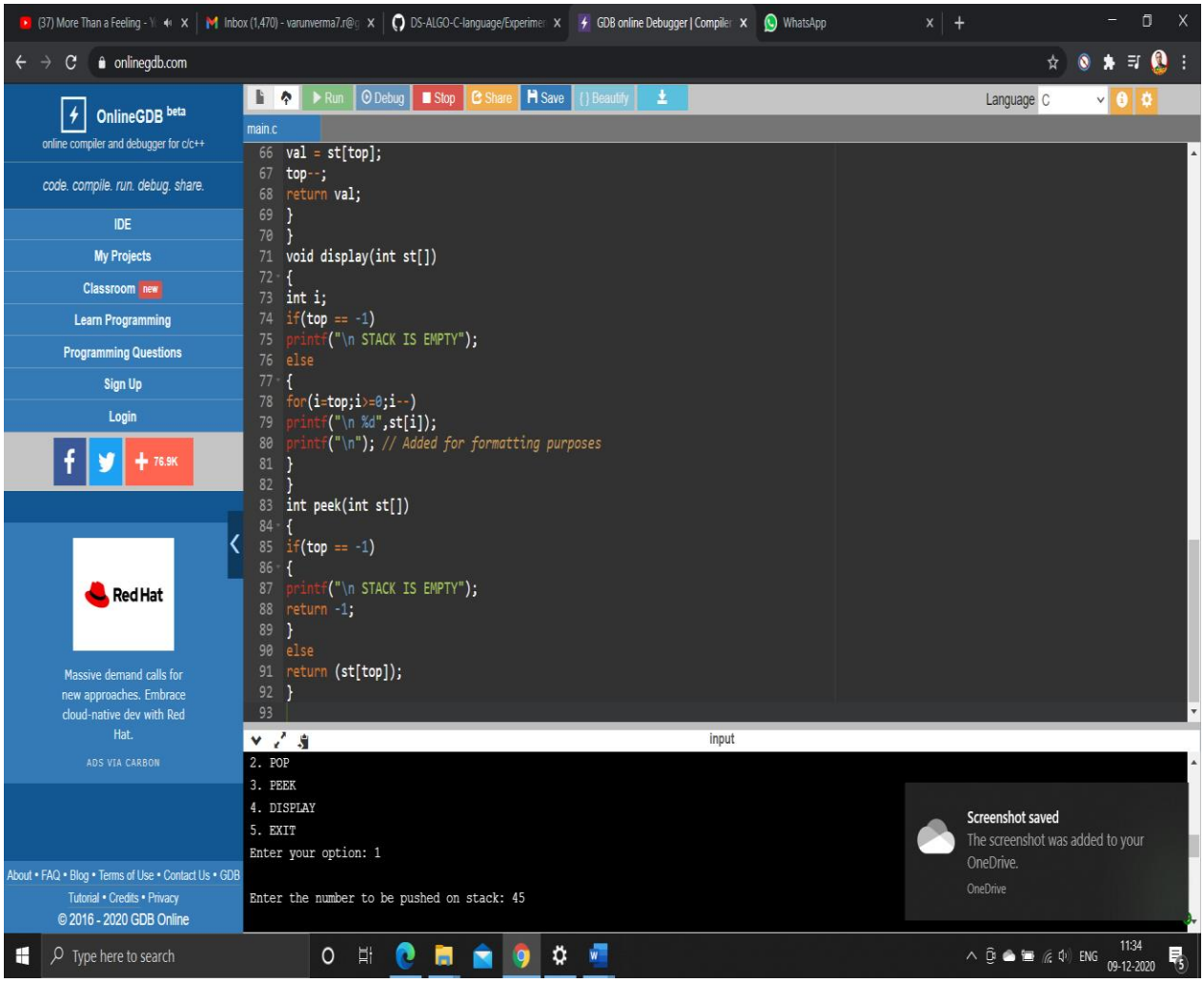
```
printf("\n*********Stack operations using linked list*********\n");
printf("\n-----------------------------------------------\n");
while(choice != 4)
{
printf("\n\nChose one from the below options...\n");
printf("\n1.Push\n2.Pop\n3.Show\n4.Exit");
printf("\n Enter your choice \n");
scanf("%d",&choice);
switch(choice)
{
case 1:
{
push();
break;
}
case 2:
{
pop();
break;
}
case 3:
{
display();
break;
}
case 4:
{
printf("Exiting....");
break;
}
default:
{
printf("Please Enter valid choice ");
}
};
}
}
void push ()
{
int val;
struct node *ptr = (struct node*)malloc(sizeof(struct node));
if(ptr == NULL)
{
printf("not able to push the element");
}
else
```

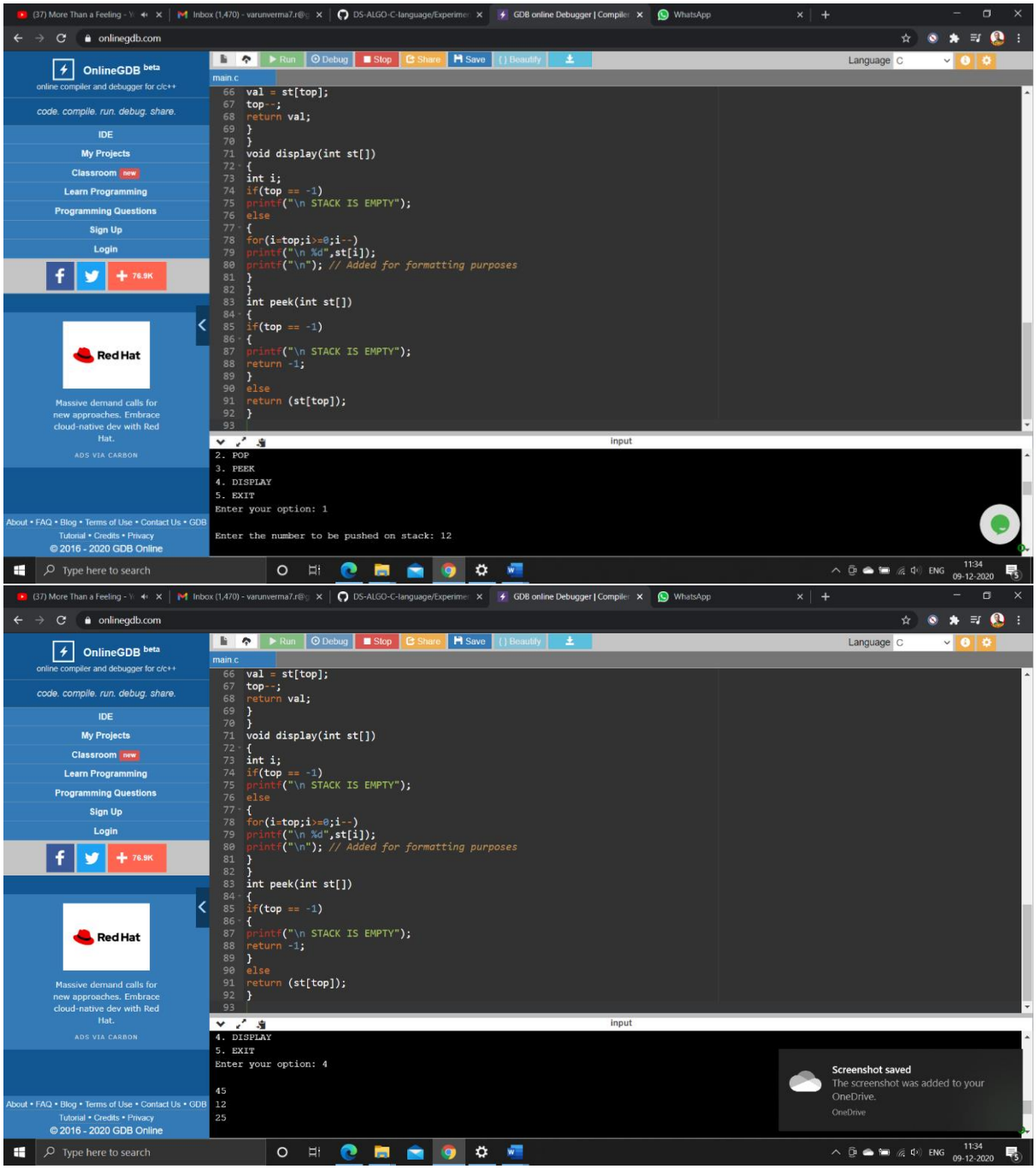
```
{
printf("Enter the value");
scanf("%d",&val);
if(head==NULL)
{
ptr->val = val;
ptr -> next = NULL;
head=ptr;
}
else
{
ptr->val = val;
ptr->next = head;
head=ptr;
}
printf("Item pushed");
}
}
void pop()
{
int item;
struct node *ptr;
if (head == NULL)
{
printf("Underflow");
}
else
{
item = head->val;
ptr = head;
head = head->next;
free(ptr);
printf("Item popped");
}
}
void display()
{
int i;
struct node *ptr;
ptr=head;
if(ptr == NULL)
{
printf("Stack is empty\n");
}
else
{
```

```
printf("Printing Stack elements \n");
while(ptr!=NULL)
{
printf("%d\n",ptr->val);
ptr = ptr->next;
}
}
}
```

OUTPUT

STACK AS AN ARRAY: -

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Language C
main.c
val = st[top];
top--;
return val;
}
}
void display(int st[])
{
int i;
if(top == -1)
printf("\n STACK IS EMPTY");
else
{
for(i=top;i>=0;i--)
printf("\n %d",st[i]);
printf("\n"); // Added for formatting purposes
}
}
int peek(int st[])
{
if(top == -1)
{
printf("\n STACK IS EMPTY");
return -1;
}
else
return (st[top]);
}
input
2. POP
3. PEEK
4. DISPLAY
5. EXIT
Enter your option: 1
Enter the number to be pushed on stack: 12
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{ } Beautify
Language C
main.c
val = st[top];
top--;
return val;
}
}
void display(int st[])
{
int i;
if(top == -1)
printf("\n STACK IS EMPTY");
else
{
for(i=top;i>=0;i--)
printf("\n %d",st[i]);
printf("\n"); // Added for formatting purposes
}
}
int peek(int st[])
{
if(top == -1)
{
printf("\n STACK IS EMPTY");
return -1;
}
else
return (st[top]);
}
input
4. DISPLAY
5. EXIT
Enter your option: 4
45
12
25
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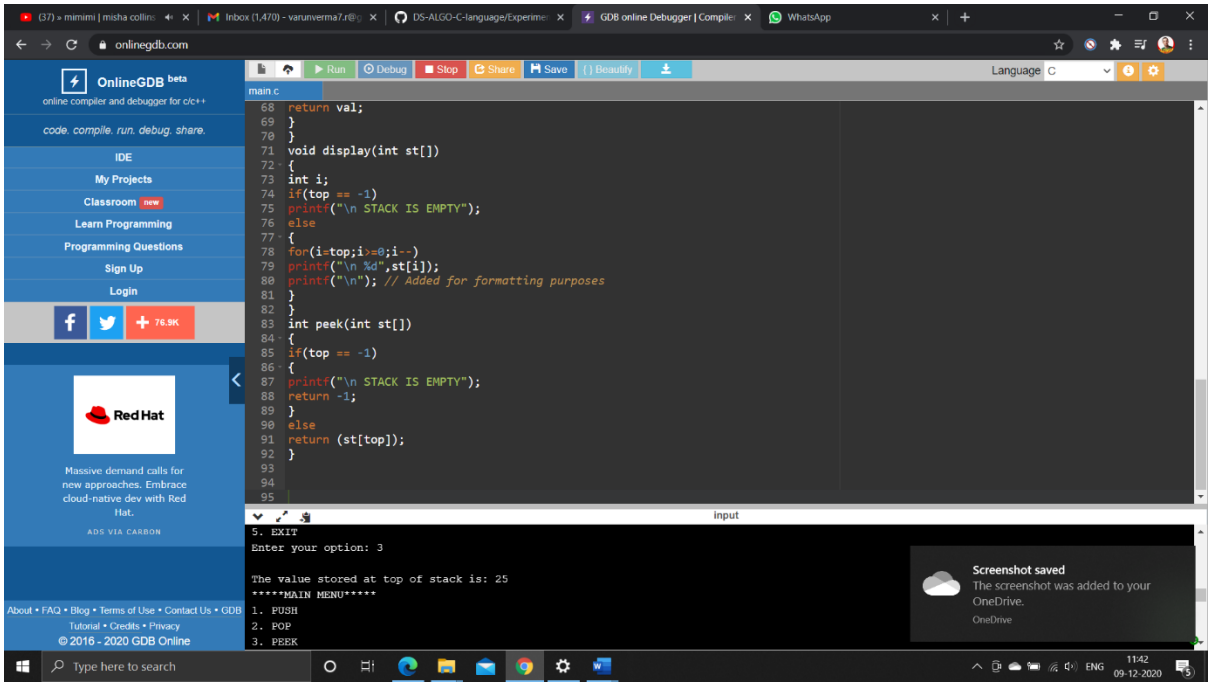
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Beautify
Language C
main.c
return val;
}
}
void display(int st[])
{
int i;
if(top == -1)
printf("\n STACK IS EMPTY");
else
{
for(i=top;i>=0;i--)
printf("\n %d",st[i]);
printf("\n"); // Added for formatting purposes
}
}
int peek(int st[])
{
if(top == -1)
{
printf("\n STACK IS EMPTY");
return -1;
}
else
return (st[top]);
}
input
5. EXIT
Enter your option: 3
The value stored at top of stack is: 25
*****MAIN MENU*****
1. PUSH
2. POP
3. PEEK
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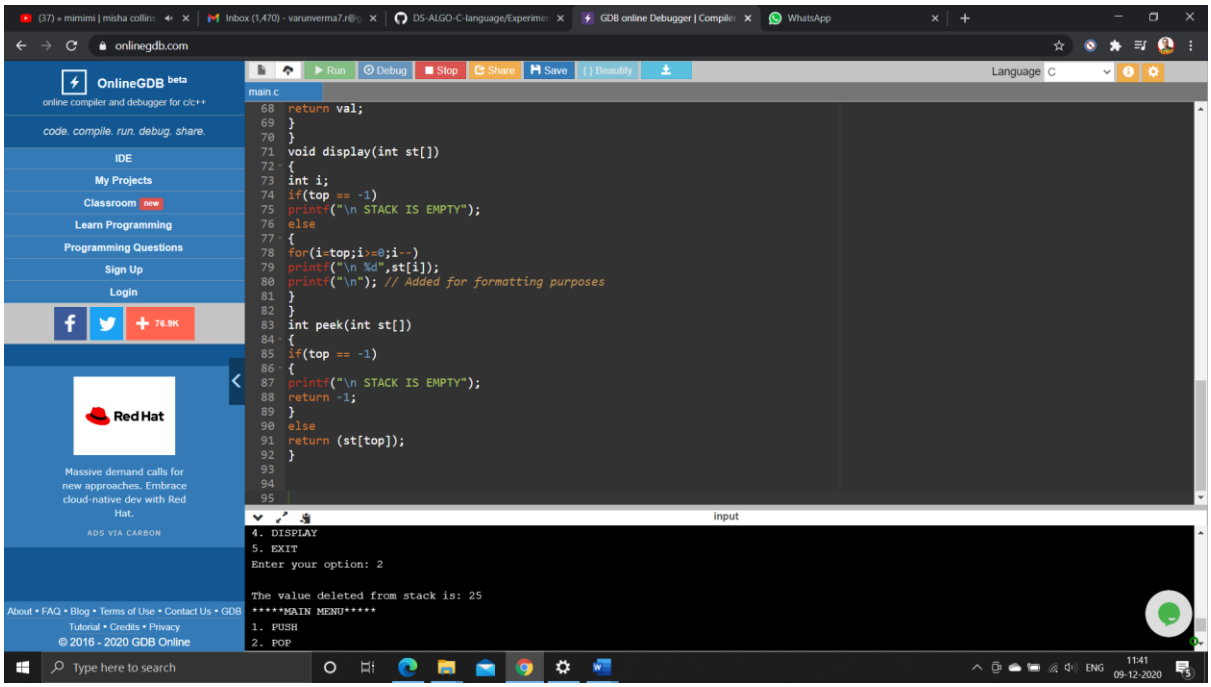
POP: -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Beautify
Language C
main.c
return val;
}
}
void display(int st[])
{
int i;
if(top == -1)
printf("\n STACK IS EMPTY");
else
{
for(i=top;i>=0;i--)
printf("\n %d",st[i]);
printf("\n"); // Added for formatting purposes
}
}
int peek(int st[])
{
if(top == -1)
{
printf("\n STACK IS EMPTY");
return -1;
}
else
return (st[top]);
}
input
4. DISPLAY
5. EXIT
Enter your option: 2
The value deleted from stack is: 25
*****MAIN MENU*****
1. PUSH
2. POP
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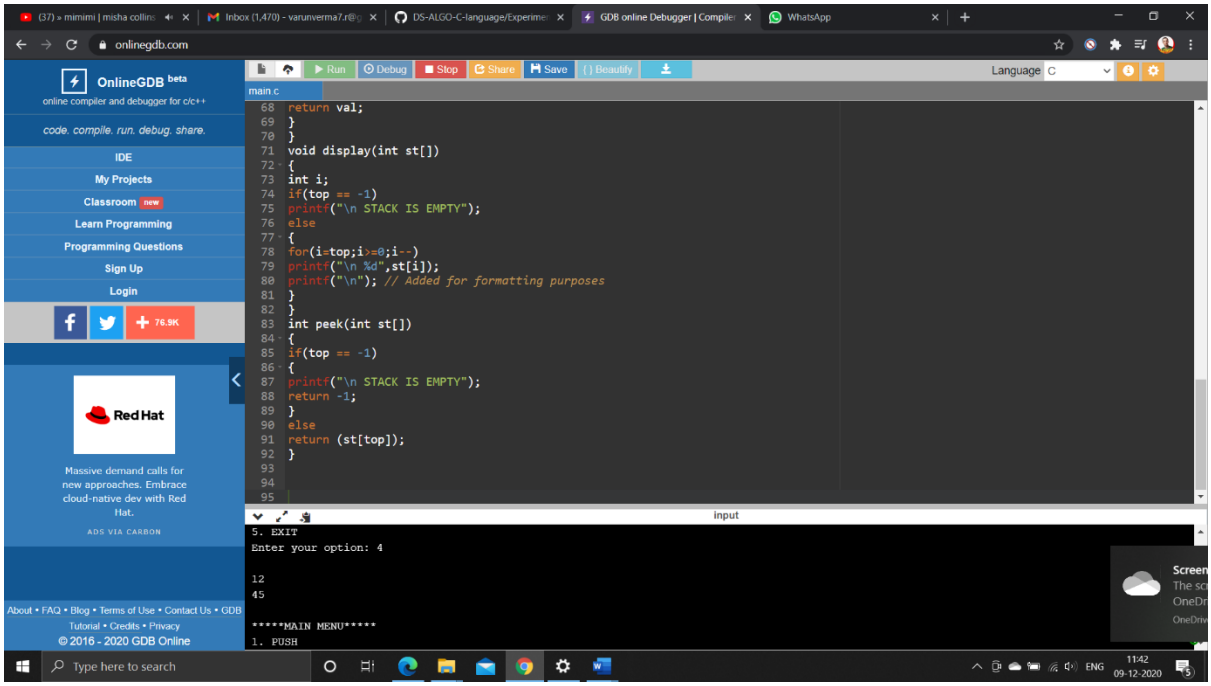
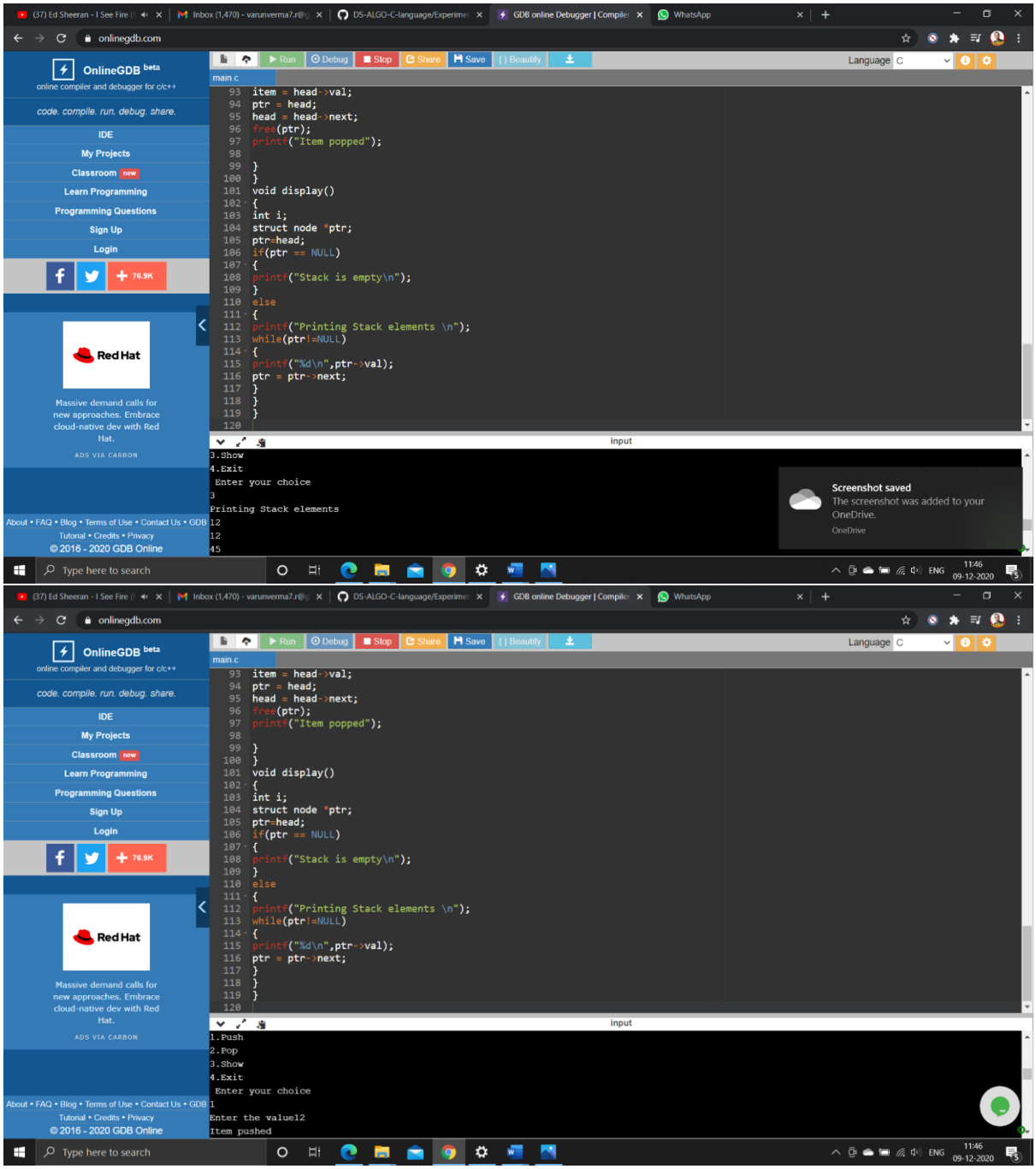


STACK AS A LINKED LIST: -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Language C
main.c
item = head->val;
ptr = head;
head = head->next;
free(ptr);
printf("Item popped");
}
}
void display()
{
int i;
struct node *ptr;
ptr=head;
if(ptr == NULL)
{
printf("Stack is empty\n");
}
else
{
printf("Printing Stack elements \n");
while(ptr!=NULL)
{
printf("%d\n",ptr->val);
ptr = ptr->next;
}
}
}
input
3.Show
4.Exit
Enter your choice
3
Printing Stack elements
12
12
45
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{ } Beautify
Language C
main.c
item = head->val;
ptr = head;
head = head->next;
free(ptr);
printf("Item popped");
}
}
void display()
{
int i;
struct node *ptr;
ptr=head;
if(ptr == NULL)
{
printf("Stack is empty\n");
}
else
{
printf("Printing Stack elements \n");
while(ptr!=NULL)
{
printf("%d\n",ptr->val);
ptr = ptr->next;
}
}
}
input
1.Push
2.Pop
3.Show
4.Exit
Enter your choice
1
Enter the value12
Item pushed
Type here to search
ENG
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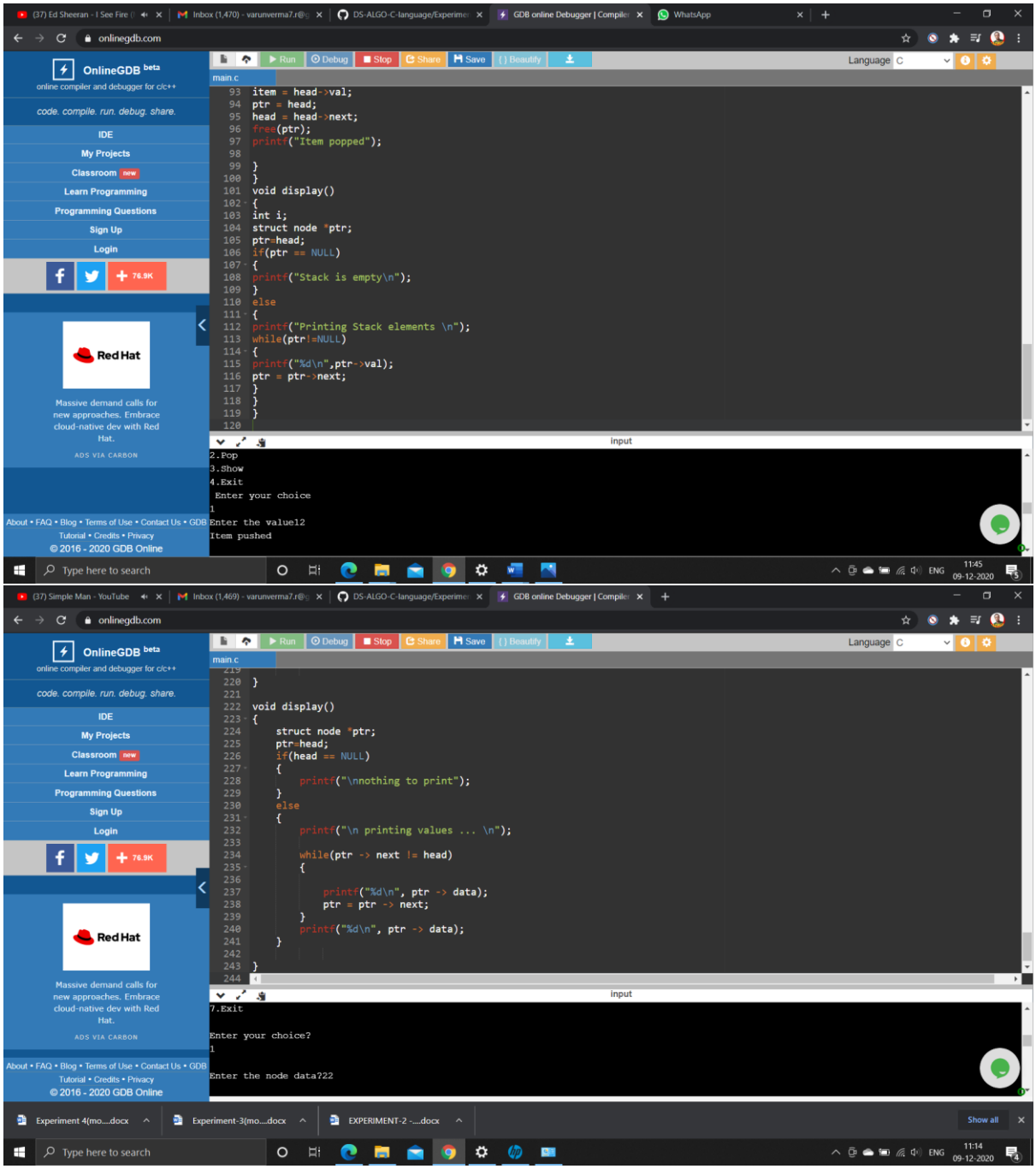
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{ } Beautify
Language C
main.c
item = head->val;
ptr = head;
head = head->next;
free(ptr);
printf("Item popped");
}
}
void display()
{
int i;
struct node *ptr;
ptr=head;
if(ptr == NULL)
{
printf("Stack is empty\n");
}
else
{
printf("Printing Stack elements \n");
while(ptr!=NULL)
{
printf("%d\n",ptr->val);
ptr = ptr->next;
}
}
}
input
2.Pop
3.Show
4.Exit
Enter your choice
1
Enter the value12
Item pushed
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{ } Beautify
Language C
main.c
}
void display()
{
struct node *ptr;
ptr=head;
if(head == NULL)
{
printf("\nnothing to print");
}
else
{
printf("\n printing values ... \n");
while(ptr -> next != head)
{
printf("%d\n", ptr -> data);
ptr = ptr -> next;
}
printf("%d\n", ptr -> data);
}
}
input
7.Exit
Enter your choice?
1
Enter the node data?22
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Experiment 4(mo....docx
Experiment-3(mo....docx
EXPERIMENT-2 -....docx
Show all
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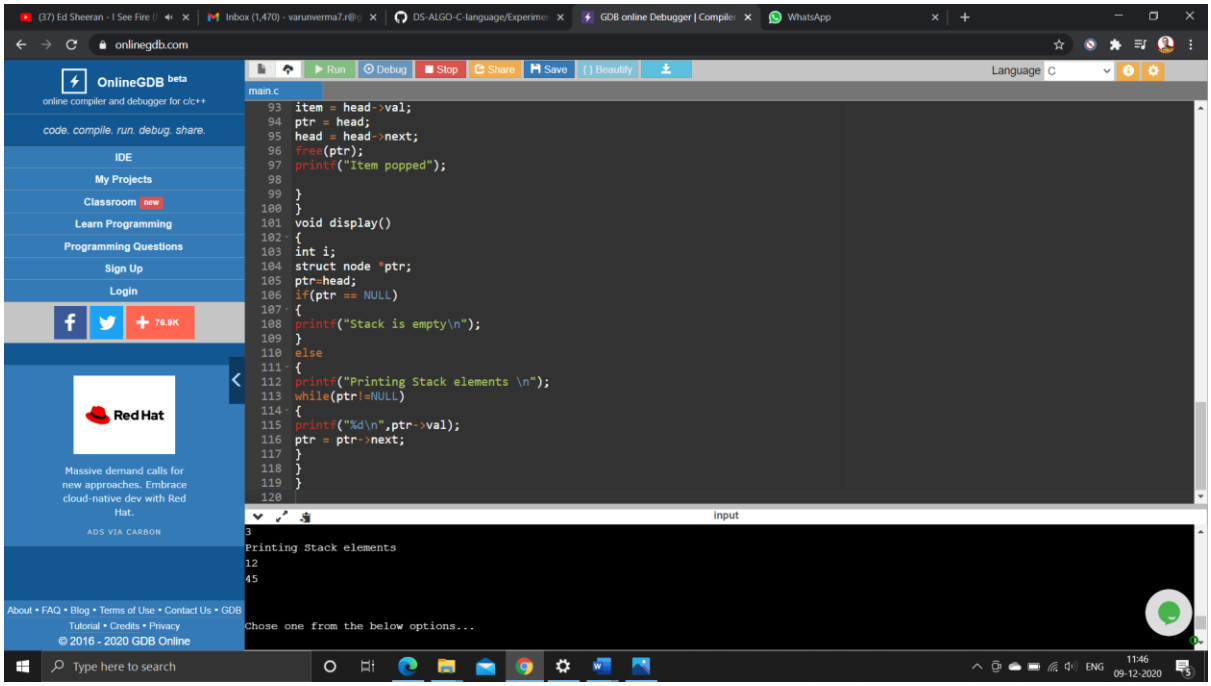
ENG
11:14
09-12-2020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{ } Beautify
Language C
main.c
item = head->val;
ptr = head;
head = head->next;
free(ptr);
printf("Item popped");
}
}
void display()
{
int i;
struct node *ptr;
ptr=head;
if(ptr == NULL)
{
printf("Stack is empty\n");
}
else
{
printf("Printing Stack elements \n");
while(ptr!=NULL)
{
printf("%d\n",ptr->val);
ptr = ptr->next;
}
}
}
input
3
Printing Stack elements
12
45
Chose one from the below options...
Type here to search
ENG
11:46
09-12-2020

Experiment 4

Aim: - To implement doubly linked list

Name: - Varun Verma

Branch: - EEE

Source Code: -

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

struct node
{
    struct node *prev;
    int n;
    struct node *next;
}*h,*temp,*temp1,*temp2,*temp4;

void insert1();
void insert2();
void insert3();
void traversebeg();
void traverseend(int);
void sort();
void search();
void update();
void delete();

int count = 0;

void main()
{
    int ch;

    h = NULL;
    temp = temp1 = NULL;

    printf("\n 1 - Insert at beginning");
    printf("\n 2 - Insert at end");
    printf("\n 3 - Insert at position i");
    printf("\n 4 - Delete at i");
    printf("\n 5 - Display from beginning");
    printf("\n 6 - Display from end");
    printf("\n 7 - Search for element");
    printf("\n 8 - Sort the list");
    printf("\n 9 - Update an element");
    printf("\n 10 - Exit");
```

```
    while (1)
    {
        printf("\n Enter choice : ");
        scanf("%d", &ch);
        switch (ch)
        {
        case 1:
            insert1();
            break;
        case 2:
            insert2();
            break;
        case 3:
            insert3();
            break;
        case 4:
            delete();
            break;
        case 5:
            traversebeg();
            break;
        case 6:
            temp2 = h;
            if (temp2 == NULL)
                printf("\n Error : List empty to display ");
            else
            {
                printf("\n Reverse order of linked list is : ");
                traverseend(temp2->n);
            }
            break;
        case 7:
            search();
            break;
        case 8:
            sort();
            break;
        case 9:
            update();
            break;
        case 10:
            exit(0);
        default:
            printf("\n Wrong choice menu");
        }
    }
}

/* TO create an empty node */
void create()
{
    int data;

    temp =(struct node *)malloc(1*sizeof(struct node));
    temp->prev = NULL;
    temp->next = NULL;
    printf("\n Enter value to node : ");
    scanf("%d", &data);
    temp->n = data;
    count++;
}
```

```c
/*  TO insert at beginning */
void insert1()
{
    if (h == NULL)
    {
        create();
        h = temp;
        temp1 = h;
    }
    else
    {
        create();
        temp->next = h;
        h->prev = temp;
        h = temp;
    }
}

/* To insert at end */
void insert2()
{
    if (h == NULL)
    {
        create();
        h = temp;
        temp1 = h;
    }
    else
    {
        create();
        temp1->next = temp;
        temp->prev = temp1;
        temp1 = temp;
    }
}

/* To insert at any position */
void insert3()
{
    int pos, i = 2;

    printf("\n Enter position to be inserted : ");
    scanf("%d", &pos);
    temp2 = h;

    if ((pos < 1) || (pos >= count + 1))
    {
        printf("\n Position out of range to insert");
        return;
    }
    if ((h == NULL) && (pos != 1))
    {
        printf("\n Empty list cannot insert other than 1st position");
        return;
    }
    if ((h == NULL) && (pos == 1))
    {
        create();
        h = temp;
        temp1 = h;
```

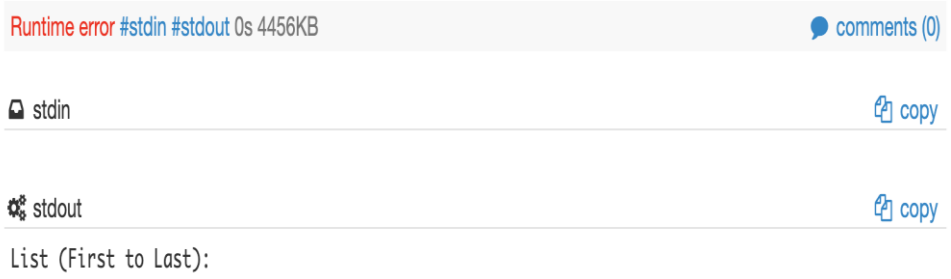
```
        return;
    }
    else
    {
        while (i < pos)
        {
            temp2 = temp2->next;
            i++;
        }
        create();
        temp->prev = temp2;
        temp->next = temp2->next;
        temp2->next->prev = temp;
        temp2->next = temp;
    }
}

/* To delete an element */
void delete()
{
    int i = 1, pos;

    printf("\n Enter position to be deleted : ");
    scanf("%d", &pos);
    temp2 = h;

    if ((pos < 1) || (pos >= count + 1))
    {
        printf("\n Error : Position out of range to delete");
        return;
    }
    if (h == NULL)
    {
        printf("\n Error : Empty list no elements to delete");
        return;
    }
    else
    {
        while (i < pos)
        {
            temp2 = temp2->next;
            i++;
        }
        if (i == 1)
        {
            if (temp2->next == NULL)
            {
                printf("Node deleted from list");
                free(temp2);
                temp2 = h = NULL;
                return;
            }
        }
        if (temp2->next == NULL)
        {
            temp2->prev->next = NULL;
            free(temp2);
            printf("Node deleted from list");
            return;
        }
        temp2->next->prev = temp2->prev;
```

```
        if (i != 1)
            temp2->prev->next = temp2->next;      /* Might not need this
statement if i == 1 check */
        if (i == 1)
            h = temp2->next;
        printf("\n Node deleted");
        free(temp2);
    }
    count--;
}

/* Traverse from beginning */
void traversebeg()
{
    temp2 = h;

    if (temp2 == NULL)
    {
        printf("List empty to display \n");
        return;
    }
    printf("\n Linked list elements from begining : ");

    while (temp2->next != NULL)
    {
        printf(" %d ", temp2->n);
        temp2 = temp2->next;
    }
    printf(" %d ", temp2->n);
}

/* To traverse from end recursively */
void traverseend(int i)
{
    if (temp2 != NULL)
    {
        i = temp2->n;
        temp2 = temp2->next;
        traverseend(i);
        printf(" %d ", i);
    }
}

/* To search for an element in the list */
void search()
{
    int data, count = 0;
    temp2 = h;

    if (temp2 == NULL)
    {
        printf("\n Error : List empty to search for data");
        return;
    }
    printf("\n Enter value to search : ");
    scanf("%d", &data);
    while (temp2 != NULL)
    {
        if (temp2->n == data)
        {
            printf("\n Data found in %d position",count + 1);
```

```
            return;
        }
        else
             temp2 = temp2->next;
            count++;
    }
    printf("\n Error : %d not found in list", data);
}

/* To update a node value in the list */
void update()
{
    int data, data1;

    printf("\n Enter node data to be updated : ");
    scanf("%d", &data);
    printf("\n Enter new data : ");
    scanf("%d", &data1);
    temp2 = h;
    if (temp2 == NULL)
    {
        printf("\n Error : List empty no node to update");
        return;
    }
    while (temp2 != NULL)
    {
        if (temp2->n == data)
        {

            temp2->n = data1;
            traversebeg();
            return;
        }
        else
            temp2 = temp2->next;
    }

    printf("\n Error : %d not found in list to update", data);
}

/* To sort the linked list */
void sort()
{
    int i, j, x;

    temp2 = h;
    temp4 = h;

    if (temp2 == NULL)
    {
        printf("\n List empty to sort");
        return;
    }

    for (temp2 = h; temp2 != NULL; temp2 = temp2->next)
    {
        for (temp4 = temp2->next; temp4 != NULL; temp4 = temp4->next)
        {
            if (temp2->n > temp4->n)
            {
                x = temp2->n;
```

```
                temp2->n = temp4->n;
                temp4->n = x;
            }
        }
    }
    traversebeg();
}
```

Screen shot :



Output

```
gcc -o /tmp/5XSumhBOQo.o /tmp/5XSumhBOQo.c -lm
/tmp/5XSumhBOQo.o
1 - Insert at beginning
 2 - Insert at end
 3 - Insert at position i
 4 - Delete at i
 5 - Display from beginning
 6 - Display from end
 7 - Search for element
 8 - Sort the list
 9 - Update an element
 10 - Exit
 Enter choice : 1
 Enter value to node : 34

 Enter choice : 1

 Enter value to node : 34

 Enter choice : 5

 Linked list elements from begining :  34  34
 Enter choice :
```

```
gcc -o /tmp/GSOhb615dZ.o /tmp/GSOhb615dZ.c -lm
/tmp/GSOhb615dZ.o
1 - Insert at beginning
 2 - Insert at end
 3 - Insert at position i
 4 - Delete at i
 5 - Display from beginning
 6 - Display from end
 7 - Search for element
 8 - Sort the list
 9 - Update an element
 10 - Exit
 Enter choice : 1
 Enter value to node : 34

 Enter choice : 1
 Enter value to node : 34
 Enter choice : 3
 Enter position to be inserted : 2

 Enter value to node : 45

 Enter choice : 4

 Enter position to be deleted : 2
 Node deleted
 Enter choice :
```

Experiment : -3
Aim: - write a program to implement singly linked list
Name: -Varun verma
Roll No.: - 02211504919
Branch: - EEE

Source Code: -

```
1. #include <stdio.h>
2. #include <malloc.h>
3. #include <stdlib.h>
4.
5. struct node {
6. int value;
7. struct node *next;
8. };
9.
10.     void insert();
11.     void display();
12.     void delete();
13.     int count();
14.
15.     typedef struct node DATA_NODE;
16.
17.     DATA_NODE *head_node, *first_node, *temp_node = 0,
   *prev_node, next_node;
18.     int data;
19.
20.     int main() {
21.     int option = 0;
22.
23.     printf("Singly Linked List Example - All
   Operations\n");
24.
25.     while (option < 5) {
26.
```

```
27.     printf("\nOptions\n");
28.     printf("1 : Insert into Linked List \n");
29.     printf("2 : Delete from Linked List \n");
30.     printf("3 : Display Linked List\n");
31.     printf("4 : Count Linked List\n");
32.     printf("Others : Exit()\n");
33.     printf("Enter your option:");
34.     scanf("%d", &option);
35.     switch (option) {
36.     case 1:
37.     insert();
38.     break;
39.     case 2:
40.     delete();
41.     break;
42.     case 3:
43.     display();
44.     break;
45.     case 4:
46.     count();
47.     break;
48.     default:
49.     break;
50.     }
51.     }
52.
53.     return 0;
54.     }
55.
56.     void insert() {
57.     printf("\nEnter Element for Insert Linked List :
   \n");
58.     scanf("%d", &data);
59.
60.     temp_node = (DATA_NODE *) malloc(sizeof
   (DATA_NODE));
61.
62.     temp_node->value = data;
63.
64.     if (first_node == 0) {
65.     first_node = temp_node;
66.     } else {
67.     head_node->next = temp_node;
68.     }
69.     temp_node->next = 0;
70.     head_node = temp_node;
```

```
71.     fflush(stdin);
72.     }
73.
74.     void delete() {
75.     int countvalue, pos, i = 0;
76.     countvalue = count();
77.     temp_node = first_node;
78.     printf("\nDisplay Linked List : \n");
79.
80.     printf("\nEnter Position for Delete Element : \n");
81.     scanf("%d", &pos);
82.
83.     if (pos > 0 && pos <= countvalue) {
84.     if (pos == 1) {
85.     temp_node = temp_node -> next;
86.     first_node = temp_node;
87.     printf("\nDeleted Successfully \n\n");
88.     } else {
89.     while (temp_node != 0) {
90.     if (i == (pos - 1)) {
91.     prev_node->next = temp_node->next;
92.     if(i == (countvalue - 1))
93.     {
94.     head_node = prev_node;
95.     }
96.     printf("\nDeleted Successfully \n\n");
97.     break;
98.     } else {
99.     i++;
100.    prev_node = temp_node;
101.    temp_node = temp_node -> next;
102.    }
103.    }
104.    }
105.    } else
106.    printf("\nInvalid Position \n\n");
107.    }
108.
109.    void display() {
110.    int count = 0;
111.    temp_node = first_node;
112.    printf("\nDisplay Linked List : \n");
113.    while (temp_node != 0) {
114.    printf("# %d # ", temp_node->value);
115.    count++;
116.    temp_node = temp_node -> next;
```

```
117.    }
118.    printf("\nNo Of Items In Linked List : %d\n",
  count);
119.    }
120.
121.    int count() {
122.    int count = 0;
123.    temp_node = first_node;
124.    while (temp_node != 0) {
125.    count++;
126.    temp_node = temp_node -> next;
127.    }
128.    printf("\nNo Of Items In Linked List : %d\n",
  count);
129.    return count;
130.    }
```

OUTPUT: -

```
117.   }
118.   printf("\nNo Of Items In Linked List : %d\n", count);
119. }
120.
121. int count() {
122.   int count = 0;
123.   temp_node = first_node;
124.   while (temp_node != 0) {
125.     count++;
126.     temp_node = temp_node -> next;
127.   }
128.   printf("\nNo Of Items In Linked List : %d\n", count);
129.   return count;
130. }
131.
```

Runtime error #stdin #stdout 0s 4320KB comments (0)

stdin copy

```
Standard input is empty
```

stdout copy

```
Singly Linked List Example - All Operations

Options
1 : Insert into Linked List
2 : Delete from Linked List
3 : Display Linked List
4 : Count Linked List
Others : Exit()
Enter your option:
Options
1 : Insert into Linked List
2 : Delete from Linked List
3 : Display Linked List
4 : Count Linked List
Others : Exit()
```

EXPERIMENT 1

NAME:- Varun Verma

BRANCH:- EEE

ROLL NUMBER:- 02211504919

AIM: - Write a menu driven program to implement Linear Search and Binary Search

Program Code:-

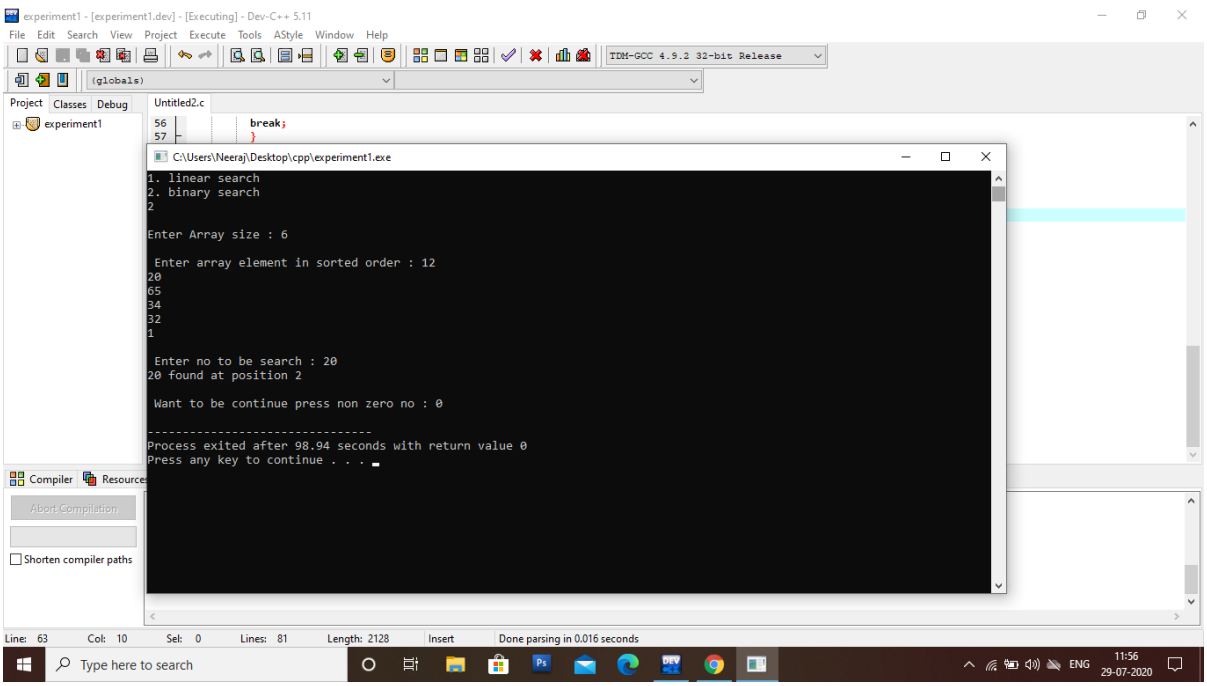
```
/*write a menu driven program to do the searching
I) Linear Search
ii) Binary Search*/
#include<stdio.h>
void lsearch(int [],int);
void bsearch(int [],int);
int main()
{
int ch,ch1,m,n;
int a[10],b[10],i;
do
  {
    printf("\nEnter your choice :");
     printf("\n1. linear search");
     printf("\n2. binary search");
     scanf("\n%d",&ch);
     switch(ch)
     {
```

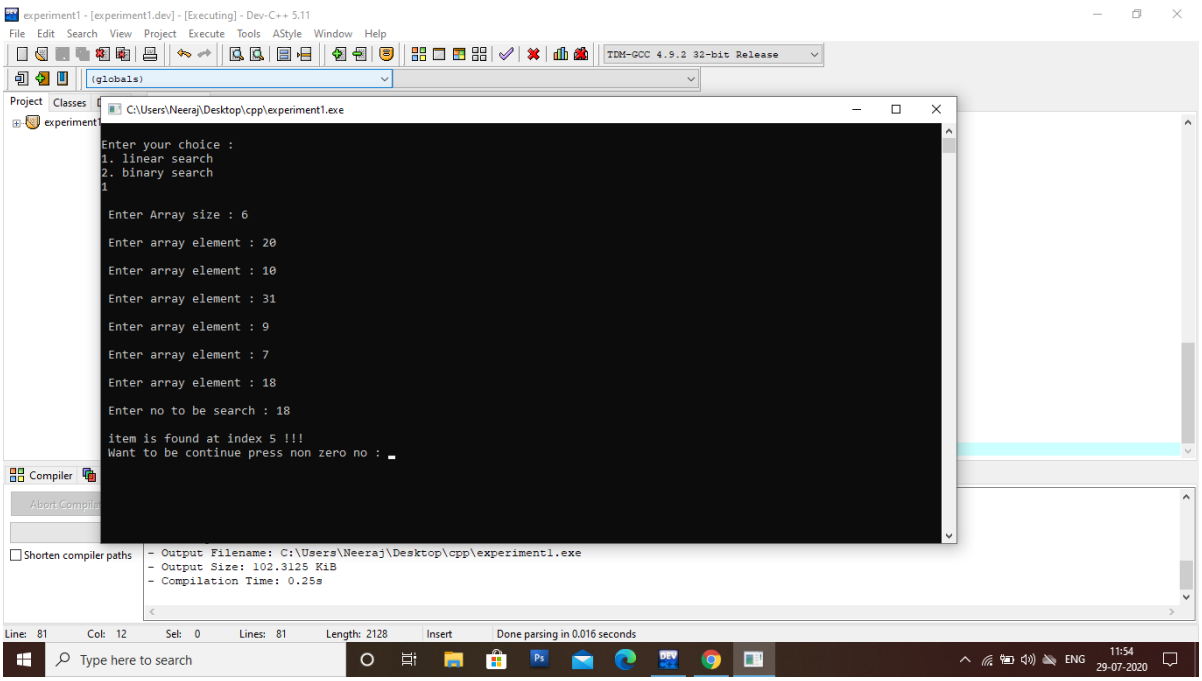
```
    case 1:printf("\n Enter Array size : ");
            scanf("%d",&m);
            for(i=0;i<m;i++)
               {
                printf("\n Enter array element : ");
                scanf("%d",&a[i]);
                }
             lsearch(a,m);
             break;
    case 2: printf("\nEnter Array size : ");
             scanf("%d",&n);
             printf("\n Enter array element in sorted order : ");
             for(i=0;i<n;i++)
                  {

                   scanf("%d",&b[i]);
                  }
             bsearch(b,n);
             break;
      default: printf("\n Wrong input !!! ");
    }
    printf("\n Want to be continue press non zero no : ");
    scanf("%d",&ch1);
}
while(ch1!=0);
```

```
}
void lsearch(int a[],int m)
{
 int num,i,f=0;
 printf("\n Enter no to be search : ");
 scanf("%d",&num);
   for(i=0;i<m;i++)
     {
       if(a[i]==num)
        {
         printf("\n item is found at index %d !!!",i);
         f=1;
         break;
         }
       }
     if(f==0)
           printf("\n item is not found !!!");
 }
    void bsearch(int b[],int n)
       {
        int beg=0,num,mid,last;
        last=n-1;
        printf("\n Enter no to be search : ");
        scanf("%d",&num);
        mid=(beg+last)/2;
```

```
    while(num != b[mid] && beg <= last)
{
    if(num > b[mid])
        beg=mid+1;
    else
        last=mid-1;
    mid=(beg+last)/2;
}
if(num==b[mid])
    printf("%d found at position %d\n",num,mid+1);
if(beg>last)
    printf("%d not found in array\n",num);
      }
```

OUTPUT:-




experiment1 - [experiment1.dev] - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 32-bit Release
(globals)
Project Classes
C:\Users\Neeraj\Desktop\cpp\experiment1.exe
Enter your choice :
1. linear search
2. binary search
1
Enter Array size : 6
Enter array element : 20
Enter array element : 10
Enter array element : 31
Enter array element : 9
Enter array element : 7
Enter array element : 18
Enter no to be search : 18
item is found at index 5 !!!
Want to be continue press non zero no :
Compiler
Shorten compiler paths
- Output Filename: C:\Users\Neeraj\Desktop\cpp\experiment1.exe
- Output Size: 102.3125 KiB
- Compilation Time: 0.25s
Line: 81 Col: 12 Sel: 0 Lines: 81 Length: 2128 Insert Done parsing in 0.016 seconds
Type here to search
ENG
11:54
29-07-2020

EXPERIMENT-2

Name :- Varun Verma

Roll no :- 02211504919

Branch :- EEE

Aim:-Write a menu driven program to:-

(a) To insert an element in the array.
(b) To delete an element in the array.

Answer (a):-

Program of insert of an element in the array:-

```
#include<stdio.h>
int main(){
int arr[100] ={0};
int pos, n = 10, x, I;
// initial array of size 10
for(i = 0; i < 10; i++);
arr[i]=i+1;
//print the original array

for (i = 0; i < n; i++)
    printf("%d ", arr[i]);
  printf("\n");

  // element to be inserted
  x = 50;

  // position at which element
  // is to be inserted
  pos = 5;

  // increase the size by 1
  n++;
```

```
    // shift elements forward
    for (i = n; i >= pos; i--)
        arr[i] = arr[i - 1];

    // insert x at pos
    arr[pos - 1] = x;

    // print the updated array
    for (i = 0; i < n; i++)
        printf("%d ", arr[i]);
    printf("\n");

    return 0;
}
```

(b)Program to delete an element from array

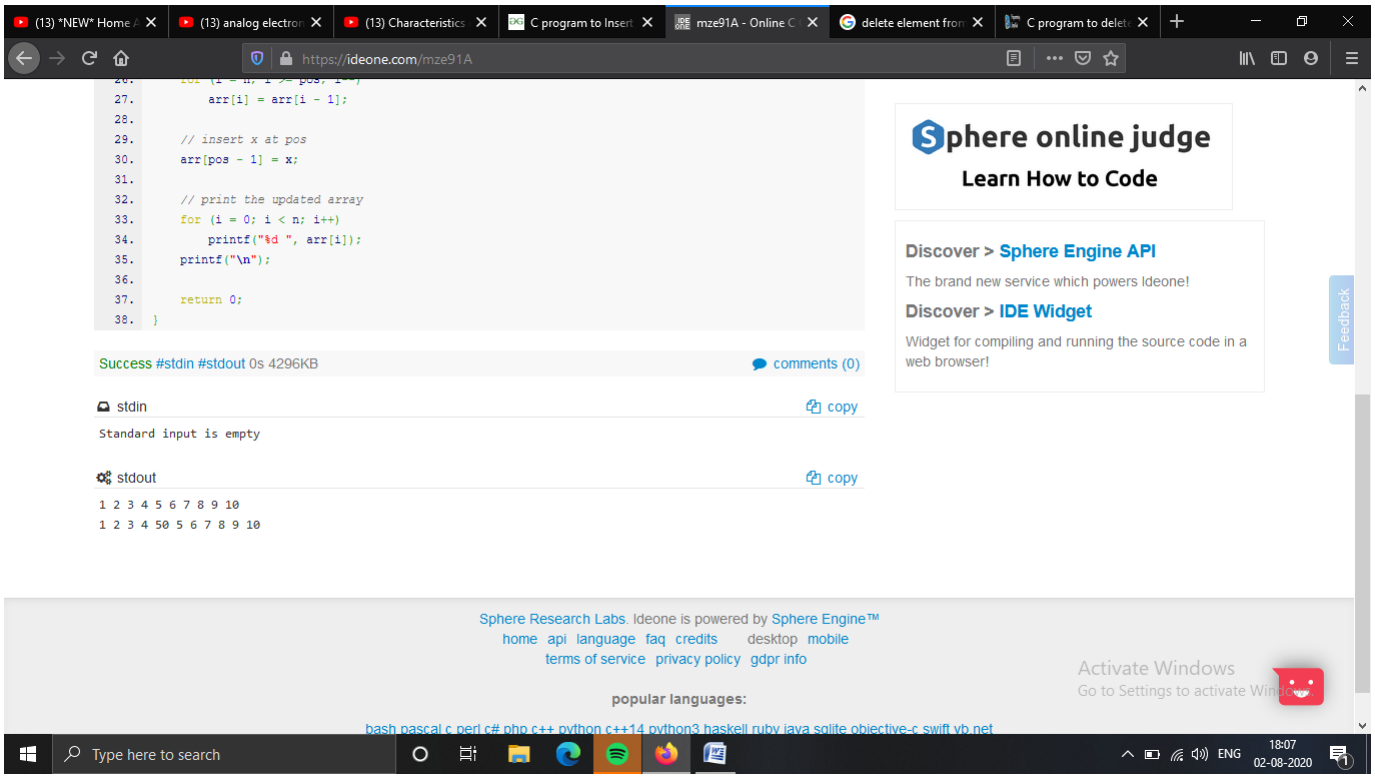
```
#include <stdio.h>

int main()
{
    int array[100], position, c, n;

    printf("Enter number of elements in array\n");
    scanf("%d", &n);

    printf("Enter %d elements\n", n);

    for ( c = 0 ; c < n ; c++ )
    scanf("%d", &array[c]);

    printf("Enter the location where you wish to delete element\n");
    scanf("%d", &position);

    if ( position >= n+1 )
    printf("Deletion not possible.\n");
```

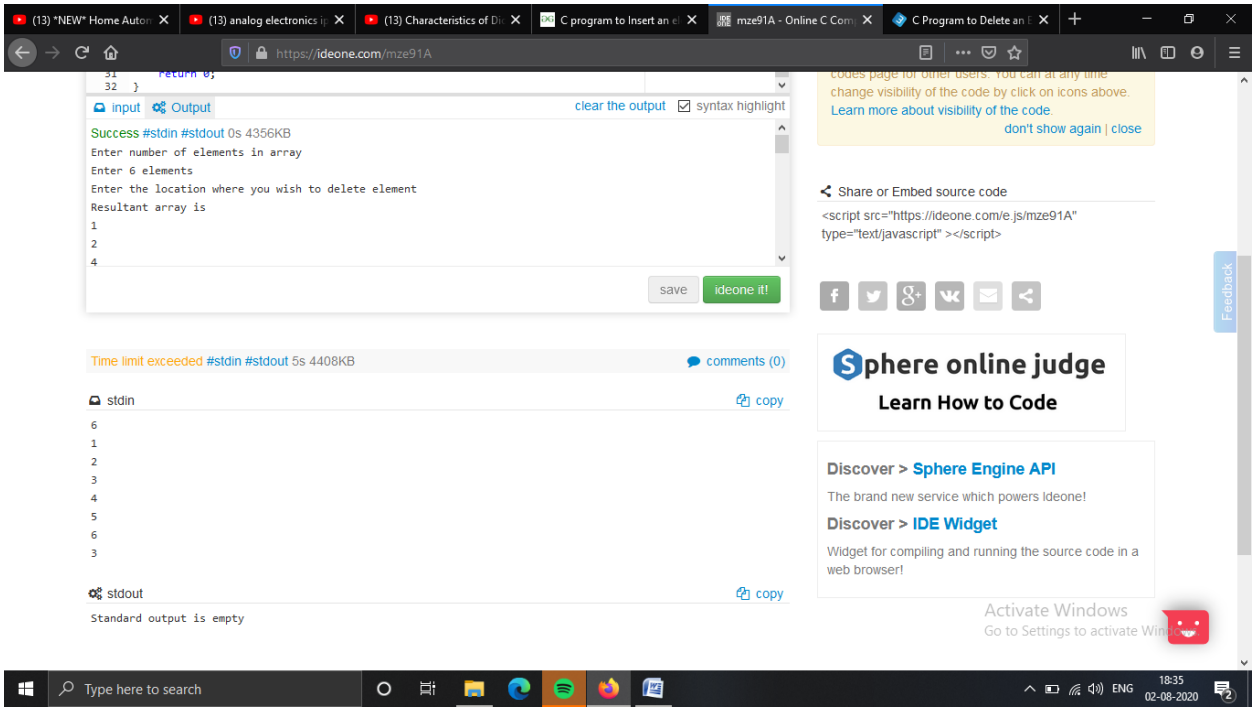
```
    else
    {
       for ( c = position - 1 ; c < n - 1 ; c++ )
         array[c] = array[c+1];

       printf("Resultant array is\n");

       for( c = 0 ; c < n - 1 ; c++ )
         printf("%d\n", array[c]);
    }
    return 0;
}
```

OUTPUT

(a) Output of insert an element in the array

(b) Output of delete an element in the array




(13) *NEW* Home Auton
(13) analog electronics ip
(13) Characteristics of Di
C program to Insert an el
mze91A - Online C Comp
C Program to Delete an E
https://ideone.com/mze91A
return 0;
}
input
Output
clear the output
syntax highlight
Success #stdin #stdout 0s 4356KB
Enter number of elements in array
Enter 6 elements
Enter the location where you wish to delete element
Resultant array is
1
2
4
save
ideone it!
Time limit exceeded #stdin #stdout 5s 4408KB
comments (0)
stdin
copy
6
1
2
3
4
5
6
3
stdout
copy
Standard output is empty
change visibility of the code by click on icons above.
Learn more about visibility of the code.
don't show again | close
Share or Embed source code
<script src="https://ideone.com/e.js/mze91A"
type="text/javascript" ></script>
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