1)PROBLEM RECURSION USING PRINT ABCDEFGHIJKLMNO

#include<stdio.h>

void printChars(int i, char ch)

{

printf("%c ", ch);

if(i % 5 == 0)

printf("\n");

if(i < 15)

printChars(i + 1, ch + 1);

}

void main()

{

printChars(1, 65);

}

OUTPUT:

A B C D E

F G H I J

K L M N O

2)**PROBLEM USER ENTER A 10 NUMBER AND COUNT ODD EVEN NUMBERS :**

**#include<stdio.h>**

**void main()**

**{**

**int i,a[10],e\_sum=0,o\_sum=0;**

**printf("Enter a numbers:");**

**for(i=0;i<10;i++)**

**{**

**scanf("%d",&a[i]);**

**if(a[i]%2==0)**

**{**

**e\_sum=e\_sum+a[i];**

**}**

**else**

**{**

**o\_sum=o\_sum+a[i];**

**}**

**}**

**printf("%d %d",e\_sum,o\_sum);**

**}**

**OUTPUT:**

**Enter a numbers:1**

**2**

**3**

**4**

**5**

**6**

**7**

**8**

**9**

**1**

**e\_sum=20,o\_sum26**

**3)SWAP THE NUMBERS USING ARRAYS :**

**#include<stdio.h>**

**int main()**

**{**

**int a[10] = {5, 3, 5, 6, 7, 8, 3, 2, 1, 2};**

**for(int i = 0; i <10; i=i+2)**

**{**

**int t = a[i];**

**a[i] = a[i + 1];**

**a[i + 1] = t;**

**}**

**for(int i = 0; i < 10; i++)**

**{**

**printf("%d\t", a[i]);**

**}**

**}**

**OUTPUT:**

**3 5 6 5 8 7 2 3 2 1**

**4)WITHOUT USING THIRD VARAIABLE IN ARRAYS :**

**#include<stdio.h>**

**int main()**

**{**

**int a[10] = {5, 3, 5, 6, 7, 8, 3, 2, 1, 2};**

**for(int i = 0; i <10; i=i+2)**

**{**

**a[i] = a[i]+a[i+1];**

**a[i+1] = a[i]-a[i+1];**

**a[i] =a[i]-a[i+1];**

**}**

**for(int i = 0; i < 10; i++)**

**{**

**printf("%d\t", a[i]);**

**}**

**}**

**OUTPUT:**

**3 5 6 5 8 7 2 3 2 1**

**5)SIMPLE PROBLEM:**

**#include<stdio.h>**

**void main()**

**{**

**int i=5;**

**while(i-->=0)**

**printf("%d ",i);**

**i=5;**

**printf("\n");**

**while(i-->=0)**

**printf("%i ",i);**

**printf("\n");**

**while(i-->=0)**

**printf("%d ",i);**

**printf("\n");**

**}**

**OUTPUT:**

**4 3 2 1 0 -1**

**4 3 2 1 0 -1**

**6) SIMPLE PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int a=10,b;**

**a>=5?b=100:(b=100);**

**printf("%d",b);**

**}**

**OUTPUT:**

**100**

**7)SIMPLE PROGRAM: POSITIVE OR NEGATIVE NUMBER:**

**#include<stdio.h>**

**void main()**

**{**

**int n;**

**printf("Enter a number:");**

**scanf("%d",&n);**

**if(n>0)**

**printf("positive no");**

**else**

**printf("negative no");**

**}**

**OUTPUT:**

**Enter a number:5**

**positive no**

**8) sum and avg using arrays:**

**#include<stdio.h>**

**void main()**

**{**

**int a[5],sum=0,avg=0,i;**

**printf("Enter a number:");**

**for(i=0;i<5;i++)**

**{**

**scanf("%d",&a[i]);**

**sum=sum+a[i];**

**avg=sum/5;**

**}**

**printf("sum=%d,avg=%d",sum,avg);**

**}**

**OUTPUT:**

**Enter a number:33**

**22**

**66**

**77**

**88**

**sum=286,avg=57**

**9)print no -200 to 200:**

**#include<stdio.h>**

**void main()**

**{**

**long int i;**

**for(i=-200;i<=200;i++)**

**{**

**printf("%d\n",i);**

**}**

**}**

**OUTPUT:**

**-200 to 200**

**10)STAR PATTERN :**

**#include<stdio.h>**

**void main()**

**{**

**int i, j;**

**for(i = 1; i <= 5; i++)**

**{**

**for(j = 1; j <= 5; j++)**

**{**

**if(i == 1 || i == 5 || j == 1 || j == 5)**

**{**

**printf("\* ");**

**}**

**else**

**{**

**printf(" ");**

**}**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**\* \* \* \* \***

**\* \***

**\* \***

**\* \***

**\* \* \* \* \***

**11)wh ich one is big number:**

**#include<stdio.h>**

**void main()**

**{**

**int n1,n2,n3;**

**printf("Enter a 3 no:");**

**scanf("%d %d %d",&n1,&n2,&n3);**

**if(n1>n2)**

**{**

**if(n1>n3)**

**printf("n1 big");**

**else**

**printf("n3 big");**

**}**

**else**

**{**

**if(n2>n3)**

**printf("n2 is big");**

**else**

**printf(" n3 is big");**

**}**

**}**

**OUTPUT:**

**Enter a number: 5 6 7**

**n3 is big**

**12)INCREMENT DECREMENT PROGRAM:**

**#include<stdio.h>**

**int main(void)**

**{**

**int a=5,b=5;**

**printf("%d,%d\t",++a,b--);**

**printf("%d,%d\t",a,b);**

**printf("%d,%d\t",++a,b++);**

**printf("%d,%d\n",a,b);**

**return 0;**

**}**

**OUTPUT:**

**6,5 6,4 7,4 7,5**

**13)CONDITIONAL STMT:**

**#include<stdio.h>**

**int main(void)**

**{**

**int a=9,b=15,c=16,d=12,e,f;**

**e=!(a<b||b<c);**

**f=(a>b)?a-b:b-a;**

**printf("e=%d,f=%d\n",e,f);**

**return 0;**

**}**

**OUTPUT:**

**e=0,f=6**

**14)STACK IN C:**

**#include <stdio.h>**

**#define NITEMS 10**

**#define S\_FULL -1**

**#define S\_EMPTY -2**

**#define S\_SUCCESS 0**

**enum stack\_operations { PUSH\_OP = 1, POP\_OP, DISP\_OP, Exit\_OP };**

**static int stack[NITEMS];**

**static int sp = -1;**

**int push(int data)**

**{**

**if (sp >= NITEMS - 1)**

**return S\_FULL;**

**else**

**stack[++sp] = data;**

**return S\_SUCCESS;**

**}**

**int pop()**

**{**

**if (sp == -1)**

**return S\_EMPTY;**

**else**

**return stack[sp--];**

**}**

**void display()**

**{**

**if (sp == -1)**

**{**

**printf("Stack is empty\n");**

**return;**

**}**

**for (int i = sp; i >= 0; i--)**

**{**

**printf("%d\n", stack[i]);**

**}**

**}**

**int main()**

**{**

**int ch, item, ret;**

**while (1) {**

**printf("1. Push\n2. Pop\n3. Display\n4. Exit\n");**

**printf("Enter your choice:\n");**

**scanf("%d", &ch);**

**switch (ch)**

**{**

**case PUSH\_OP:**

**printf("Enter the element:\n");**

**scanf("%d", &item);**

**ret = push(item);**

**if (ret == S\_FULL)**

**printf("Stack is full\n");**

**break;**

**case POP\_OP:**

**ret = pop();**

**if (ret == S\_EMPTY)**

**printf("Stack is empty\n");**

**else**

**printf("The popped item = %d\n", ret);**

**break;**

**case DISP\_OP:**

**display();**

**break;**

**case Exit\_OP:**

**return 0;**

**default:**

**printf("Invalid choice! Please try again.\n");**

**break;**

**}**

**}**

**return 0;**

**}**

**OUTPUT:**

**1. Push**

**2. Pop**

**3. Display**

**4. Exit**

**Enter your choice:**

**1**

**Enter the element:**

**10**

**1. Push**

**2. Pop**

**3. Display**

**4. Exit**

**Enter your choice:**

**1**

**Enter the element:**

**20**

**1. Push**

**2. Pop**

**3. Display**

**4. Exit**

**Enter your choice:**

**2**

**The popped item = 20**

**1. Push**

**2. Pop**

**3. Display**

**4. Exit**

**Enter your choice:**

**3**

**10**

**1. Push**

**2. Pop**

**3. Display**

**4. Exit**

**Enter your choice:**

**4**

**15) QUEUE IN C:**

**#include <stdio.h>**

**#define NITEMS 10**

**#define S\_FULL -1**

**#define S\_EMPTY -2**

**#define S\_SUCCESS 0**

**enum stack\_operations { ENQUEUE\_OP = 1, DEQUEUE\_OP, DISP\_OP, Exit\_OP };**

**static int queue[NITEMS];**

**static int front = -1;**

**static int rear = -1;**

**int enqueue(int data) {**

**if (rear == NITEMS - 1) {**

**printf("Queue is overflow\n");**

**return S\_FULL;**

**} else {**

**if (front == -1)**

**front = 0;**

**rear = rear + 1;**

**queue[rear] = data;**

**}**

**return S\_SUCCESS;**

**}**

**int dequeue() {**

**if (front == -1 || front > rear) {**

**printf("Queue is underflow\n");**

**return S\_EMPTY;**

**} else {**

**int data = queue[front++];**

**return data;**

**}**

**}**

**void display() {**

**if (front == -1 || front > rear) {**

**printf("Queue is empty\n");**

**return;**

**} else {**

**printf("Queue is:\n");**

**for (int i = front; i <= rear; i++) {**

**printf("%d\n", queue[i]);**

**}**

**}**

**}**

**int main() {**

**int ch, item, ret;**

**while (1) {**

**printf("1. Enqueue\n2. Dequeue\n3. Display\n4. Exit\n");**

**printf("Enter your choice:\n");**

**scanf("%d", &ch);**

**switch (ch) {**

**case ENQUEUE\_OP:**

**printf("Enter the element:\n");**

**scanf("%d", &item);**

**ret = enqueue(item);**

**if (ret == S\_FULL)**

**printf("Queue is full\n");**

**break;**

**case DEQUEUE\_OP:**

**ret = dequeue();**

**if (ret == S\_EMPTY)**

**printf("Queue is empty\n");**

**else**

**printf("The dequeued item = %d\n", ret);**

**break;**

**case DISP\_OP:**

**display();**

**break;**

**case Exit\_OP:**

**return 0;**

**default:**

**printf("Invalid choice! Please try again.\n");**

**break;**

**}**

**}**

**return 0;**

**}**

**OUTPUT:**

**1. Enqueue**

**2. Dequeue**

**3. Display**

**4. Exit**

**Enter your choice:**

**1**

**Enter the element:**

**10**

**1. Enqueue**

**2. Dequeue**

**3. Display**

**4. Exit**

**Enter your choice:**

**1**

**Enter the element:**

**20**

**1. Enqueue**

**2. Dequeue**

**3. Display**

**4. Exit**

**Enter your choice:**

**1**

**Enter the element:**

**30**

**1. Enqueue**

**2. Dequeue**

**3. Display**

**4. Exit**

**Enter your choice:**

**1**

**Enter the element:**

**40**

**1. Enqueue**

**2. Dequeue**

**3. Display**

**4. Exit**

**Enter your choice:**

**2**

**The dequeued item = 10**

**1. Enqueue**

**2. Dequeue**

**3. Display**

**4. Exit**

**Enter your choice:**

**2**

**The dequeued item = 20**

**1. Enqueue**

**2. Dequeue**

**3. Display**

**4. Exit**

**Enter your choice:**

**3**

**Queue is:**

**30**

**40**

**1. Enqueue**

**2. Dequeue**

**3. Display**

**4. Exit**

**Enter your choice:**

**4**

**16) WRITE A PROGRAM USING FUNCTION FIND THE BIG NUMBER:**

**#include<stdio.h>**

**void fun();**

**void main()**

**{**

**int a,b;**

**printf("Enter a number:\n");**

**scanf("%d %d",&a,&b);**

**fun(a,b);**

**}**

**void fun(int c, int d)**

**{**

**if(c>d)**

**printf("a=%d is big",c);**

**else**

**printf("b=%d is big",d);**

**}**

**OUTPUT:**

**Enter a number:**

**4**

**9**

**b=9 is big**

**17) WHAT IS LOCAL FUNCTION AND STATIC FUNCTION:**

**#include<stdio.h>**

**void fun();**

**void main()**

**{**

**int a=5;//local varaiables**

**fun(a);**

**}**

**void fun(int a)**

**{**

**printf("%d",a);**

**}**

**OUTPUT:**

**5**

**18)STATIC VARAIABLES:**

**#include<stdio.h>**

**void fun();**

**int a=5;//static varaiables**

**void main()**

**{**

**fun(a);**

**}**

**void fun(int a)**

**{**

**printf("%d",a);**

**}**

**OUTPUT:**

**5**

**19)RECEIVE A USER AND PRINT ADDITION TABLE**

**#include<stdio.h>**

**void main()**

**{**

**int a,i;**

**printf("Enter a number:");**

**scanf("%d",&a);**

**for(i=1;i<=10;i++)**

**{**

**printf("%d+%d=%d",a,i,a+i);**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**Enter a number:5**

**5+1=6**

**5+2=7**

**5+3=8**

**5+4=9**

**5+5=10**

**5+6=11**

**5+7=12**

**5+8=13**

**5+9=14**

**5+10=15**

**20)RECEIVE A NUMBER FROM USER FIND THE SUM:**

**#include<stdio.h>**

**void main()**

**{**

**int n,sum=0,i;**

**printf("Enter a number:");**

**scanf("%d",&n);**

**for(i=1;i<=n;i++)**

**{**

**sum=sum+i;**

**}**

**printf("sum=%d",sum);**

**}**

**OUTPUT:**

**Enter a number:5**

**sum=15**

**21)COUNT ODD AND EVEN NUMBER:**

**#include<stdio.h>**

**void main()**

**{**

**int i,a,even=0,odd=0;**

**printf("Enter a number:");**

**for(i=1;i<=10;i++)**

**{**

**scanf("%d",&a);**

**if(i%2==0)**

**{**

**even=even+i;**

**}**

**else**

**{**

**odd=odd+i;**

**}**

**}**

**printf("even=%d,odd=%d",even,odd);**

**}**

**OUTPUT:**

**Enter a number:6**

**8**

**6**

**5**

**4**

**4**

**3**

**2**

**2**

**8**

**even=30,odd=25**

**22)COUNT THE MULTIPLICATION OF 3 :**

**#include<stdio.h>**

**void main()**

**{**

**int i,a,count=0;**

**printf("enter a number:");**

**for(i=1;i<=10;i++)**

**{**

**scanf("%d",&a);**

**if(a%3==0)**

**count=count+a;**

**}**

**printf("count=%d",count);**

**}**

**OUTPUT:**

**enter a number:3**

**3**

**4**

**5**

**6**

**7**

**8**

**3**

**2**

**4**

**count=15**

**23)WAP PROGRAM**

**#include<stdio.h>**

**void main()**

**{**

**int a,i,even=0,odd=0;**

**printf("Enter a number:");**

**for(i=1;i<=10;i++)**

**{**

**scanf("%d",&a);**

**if(a%2==0)**

**{**

**even=a+10;**

**printf("%d",even);**

**}**

**else**

**{**

**odd=a-10;**

**printf("%d",odd);**

**}**

**}**

**}**

**OUTPUT:**

**Enter a number:8**

**18**

**Enter a number:3**

**-7**

**24)LARGEST AND SMALLEST NUMBER:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j,high,small;**

**int a[3][10];**

**printf("enter anumber:");**

**for(i=0;i<3;i++)**

**{**

**for(j=0;j<10;j++)**

**{**

**scanf("%d",&a[i][j]);**

**high=a[0][0];**

**small=a[0][0];**

**if(high>a[i][j])**

**high=a[i][j];**

**if(small<a[i][j])**

**small=a[i][j];**

**}**

**}**

**printf("small=%d,high=%d",high,small);**

**}**

**OUTPUT:**

**enter anumber:44**

**55**

**66**

**33**

**22**

**33**

**44**

**55**

**66**

**77**

**88**

**99**

**55**

**33**

**223**

**3**

**4**

**5**

**6**

**7**

**8**

**8**

**6**

**54**

**4**

**4**

**4**

**4**

**4**

**4**

**4**

**4**

**4**

**4**

**433**

**small=44,high=433**

**25)SEARCH A NUMBER:**

**#include<stdio.h>**

**void main()**

**{**

**int i, j, n;**

**int found = 0;**

**int a[3][4] = {10, 11, 12, 13, 20, 21, 22, 23, 30, 31, 32, 33};**

**printf("Enter a number: ");**

**scanf("%d", &n);**

**for(i = 0; i < 3; i++)**

**{**

**for(j = 0; j < 4; j++)**

**{**

**if(a[i][j] == n)**

**{**

**printf("Present\n");**

**found = 1;**

**break;**

**}**

**}**

**if(found)**

**{**

**break;**

**}**

**}**

**if(!found)**

**{**

**printf("Not present\n");**

**}**

**}**

**OUTPUT:**

**Enter a number: 10**

**Present**

**26)PRINT A PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,n;**

**printf("Enter a number:");**

**scanf("%d",&n);**

**for(i=1;i<=n;i++)**

**{**

**printf("\*");**

**}**

**}**

**OUTPUT:**

**Enter a number:5**

**\*\*\*\*\***

**27)PATTER PROGRAM**

**#include<stdio.h>**

**void main()**

**{**

**int i;**

**for(i=1;i<=10;i++)**

**{**

**if(i%2==0)**

**printf("#");**

**else**

**printf("\*");**

**}**

**}**

**OUTPUT:**

**\*#\*#\*#\*#\*#**

**28)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i;**

**for(i=1;i<=10;i++)**

**{**

**if(i%2==0)**

**printf("%d",i);**

**else**

**printf("\*");**

**}**

**}**

**OUTPUT:**

**\*2\*4\*6\*8\*10**

**29)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i;**

**for(i=1;i<=12;i++)**

**{**

**if(i==1||i==4||i==7||i==10)**

**{**

**printf("$");**

**}**

**else if(i==2||i==5||i==8||i==11)**

**{**

**printf("%d",i);**

**}**

**else**

**{**

**printf("\*");**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**$**

**2**

**\***

**$**

**5**

**\***

**$**

**8**

**\***

**$**

**11**

**\***

**30)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=5;j++)**

**{**

**printf("\*");**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**\*\*\*\*\***

**\*\*\*\*\***

**\*\*\*\*\***

**\*\*\*\*\***

**\*\*\*\*\***

**31)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=5;j++)**

**{**

**if(i%2==0)**

**printf("$");**

**else**

**printf("\*");**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**\*\*\*\*\***

**$$$$$**

**\*\*\*\*\***

**$$$$$**

**\*\*\*\*\***

**32)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=5;j++)**

**{**

**if(j%2==0)**

**printf("$");**

**else**

**printf("\*");**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**\*$\*$\***

**\*$\*$\***

**\*$\*$\***

**\*$\*$\***

**\*$\*$\***

**33)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=5;j++)**

**{**

**if(i%2==0)**

**printf("\*");**

**else**

**printf("%d",j);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**12345**

**\*\*\*\*\***

**12345**

**\*\*\*\*\***

**12345**

**34)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=5;j++)**

**{**

**if(j%2==0)**

**printf("%d",i);**

**else**

**printf("\*");**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**\*1\*1\***

**\*2\*2\***

**\*3\*3\***

**\*4\*4\***

**\*5\*5\***

**35)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=5;j++)**

**{**

**printf("%d",i);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**11111**

**22222**

**33333**

**44444**

**55555**

**36)PATTERN:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=5;j++)**

**{**

**printf("%d",j);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**12345**

**12345**

**12345**

**12345**

**12345**

**37)PATTERN:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=5;i>=1;i--)**

**{**

**for(j=1;j<=5;j++)**

**{**

**printf("%d",i);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**55555**

**44444**

**33333**

**22222**

**11111**

**38)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=5;j>=1;j--)**

**{**

**printf("%d",j);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**54321**

**54321**

**54321**

**54321**

**54321**

**39)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=i;j++)**

**{**

**printf("%d",j);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**1**

**12**

**123**

**1234**

**12345**

**40)PATTERN :**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=i;j++)**

**{**

**if(i%2==0)**

**printf("\*");**

**else**

**printf("%d",i);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**1**

**\*\***

**333**

**\*\*\*\***

**55555**

**41)PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=i;j++)**

**{**

**printf("%d",i);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**1**

**22**

**333**

**4444**

**55555**

**42)PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=5;i>=1;i--)**

**{**

**for(j=1;j<=i;j++)**

**{**

**printf("\*");**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**\*\*\*\*\***

**\*\*\*\***

**\*\*\***

**\*\***

**\***

**43)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=5;i>=1;i--)**

**{**

**for(j=1;j<=i;j++)**

**{**

**printf("%d",i);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**55555**

**4444**

**333**

**22**

**1**

**44)PATTERN :**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=5;j>=i;j--)**

**{**

**printf("%d",i);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**11111**

**2222**

**333**

**44**

**5**

**45)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=5;i>=1;i--)**

**{**

**for(j=5;j>=i;j--)**

**{**

**printf("%d",i);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**5**

**44**

**333**

**2222**

**11111**

**46)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=5;j++)**

**{**

**if(i==1||i==5||j==1||j==5)**

**printf("\*");**

**else**

**printf("%d",i);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**\*\*\*\*\***

**\*222\***

**\*333\***

**\*444\***

**\*\*\*\*\***

**45)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=5;j++)**

**{**

**if(i==1||i==5||j==1||j==5)**

**printf("\*");**

**else**

**printf(" ");**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**\*\*\*\*\***

**\* \***

**\* \***

**\* \***

**\*\*\*\*\***

**46)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=5;j++)**

**{**

**if(i%2==0)**

**printf(" \*");**

**else**

**printf("\*");**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**\*\*\*\*\***

**\* \* \* \* \***

**\*\*\*\*\***

**\* \* \* \* \***

**\*\*\*\*\***

**47)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=i;j++)**

**{**

**printf("%d",i);**

**}**

**printf("\n");**

**}**

**for(i=4;i>=1;i--)**

**{**

**for(j=1;j<=i;j++)**

**{**

**printf("%d",i);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**1**

**22**

**333**

**4444**

**55555**

**4444**

**333**

**22**

**1**

**48)PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=5;i>=1;i--)**

**{**

**for(j=1;j<=i;j++)**

**{**

**if(i==j)**

**printf("%d",i);**

**else**

**printf(" ");**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**5**

**4**

**3**

**2**

**1**

**49)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=5;j>=i;j--)**

**{**

**if(i==j)**

**printf("%d",i);**

**else**

**printf(" ");**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**1**

**2**

**3**

**4**

**5**

**50)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=i;j++)**

**{**

**printf(" %d",i);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**1**

**2 2**

**3 3 3**

**4 4 4 4**

**5 5 5 5 5**

**51)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=5;j++)**

**{**

**if(i==j)**

**printf("/");**

**else if((i==6-j)&&(i!=j))**

**printf("/");**

**else**

**printf("\*");**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**/\*\*\*/**

**\*/\*/\***

**\*\*/\*\***

**\*/\*/\***

**/\*\*\*/**

**52)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=5;j++)**

**{**

**if(j<=5-i)**

**printf(" ");**

**else**

**printf("%d",i);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**1**

**22**

**333**

**4444**

**55555**

**53)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=i;j++)**

**{**

**printf("%d",j);**

**}**

**printf("\n");**

**}**

**for(i=4;i>=1;i--)**

**{**

**for(j=1;j<=i;j++)**

**{**

**printf("%d",j);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**1**

**12**

**123**

**1234**

**12345**

**1234**

**123**

**12**

**1**

**22.11.2024:**

**54)PROGRAM:**

**#include<stdio.h>**

**void main(){**

**int a=8,c;**

**c=++a;**

**printf("a=%d,c=%d\n",a,c);**

**c=a++;**

**printf("a=%d,c=%d\n",a,c);**

**c=--a;**

**printf("a=%d,c=%d\n",a,c);**

**c=a--;**

**printf("a=%d,c=%d\n",a,c);**

**}**

**OUTPUT:**

**a=9,c=9**

**a=10,c=9**

**a=9,c=9**

**a=8,c=9**

**55)SAMPLE PORGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int count=0;**

**while(count!=5)**

**{**

**count++;**

**}**

**printf("%d",count);**

**}**

**OUTPUT:**

**5**

**56)SAMPLE PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int count=0;**

**do**

**{**

**count++;**

**}**

**while(count!=5);**

**printf("%d",count);**

**}**

**OUTPUT:**

**5**

**57)SAMPLE PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,count=0;**

**for(i=0;i<5;i++)**

**count++;**

**printf("count=%d",count);**

**}**

**OUTPUT:**

**count=5**

**58)SAMPLE PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i;**

**for(i=0;i<5;i++)**

**{**

**if(i==4)**

**continue;**

**}**

**printf("%d",i);**

**}**

**OUTPUT:**

**5**

**59)SAMPLE PROGRAM:**

**POSITIVE OR NEGATIVE NUMBER:**

**#include<stdio.h>**

**void main()**

**{**

**int a;**

**printf("Enter a number:");**

**scanf("%d",&a);**

**if(a<0)**

**printf("negative number");**

**else**

**printf("positive number");**

**}**

**OUTPUT:**

**Enter a number:6**

**positive number**

**Enter a number:-6**

**negative number**

**60)SAMPLE PROGRAM:**

**#include <stdio.h>**

**void main()**

**{**

**int a;**

**printf("Enter a number: ");**

**scanf("%d", &a);**

**switch (a<0)**

**{**

**case 0:**

**printf("Positive number\n");**

**break;**

**case 1:**

**printf("Negative number\n");**

**break;**

**}**

**}**

**OUTPUT:**

**Enter a number: 7**

**Positive number**

**Enter a number: -9**

**Negative number**

**61)SAMPLE PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,a,b,sum=0;**

**printf("Enter a two no:");**

**scanf("%d%d",&a,&b);**

**for(i=a;i<=b;i++)**

**{**

**sum=sum+i;**

**printf("%dsum=%d\n",i,sum);**

**if(sum>=100)**

**break;**

**}**

**if(sum>=100){**

**printf("%d",i);**

**}**

**}**

**OUTPUT:**

**Enter a two no:6 8**

**6sum=6**

**7sum=13**

**8sum=21**

**62)SIMPLE PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,a,b,sum=0;**

**printf("Enter a two no:");**

**scanf("%d%d",&a,&b);**

**for(i=a;i<=b;i++)**

**{**

**sum=sum+i;**

**printf("%dsum=%d\n",i,sum);**

**if(sum>=100)**

**break;**

**}**

**printf("%d",i);**

**}**

**OUTPUT:**

**Enter a two no:5 95**

**5sum=5**

**6sum=11**

**7sum=18**

**8sum=26**

**9sum=35**

**10sum=45**

**11sum=56**

**12sum=68**

**13sum=81**

**14sum=95**

**15sum=110**

**15**

**63)SIMPLE PROGRAM;**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=65;i<=69;i++)**

**{**

**for(j=65;j<=i;j++)**

**{**

**printf("%c",j);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**A**

**AB**

**ABC**

**ABCD**

**ABCDE**

**64)SIMPLE PROGRAM:**

**#include <stdio.h>**

**int main()**

**{**

**int i, j;**

**for (i = 65; i <= 69; i++)**

**{**

**for (j = i; j >= 65; j--)**

**{**

**printf("%c ", j);**

**}**

**printf("\n");**

**}**

**return 0;**

**}**

**OUTPUT:**

**A**

**B A**

**C B A**

**D C B A**

**E D C B A**

**65)SAMPLE PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int a;**

**printf("Enter a number:");**

**scanf("%d",&a);**

**if(a>0)**

**goto pos;**

**else**

**goto nega;**

**pos: printf("positive no\n");**

**goto end;**

**nega: printf("negative no\n");**

**goto end;**

**end: printf("end of program\n");**

**}**

**OUTPUT:**

**Enter a number:8**

**positive no**

**end of program**

**Enter a number:-5**

**negative no**

**end of program**

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**66)SAMPLE PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j,k,l;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=i;j++)**

**{**

**printf("\*");**

**}**

**printf("\n");**

**}**

**for(k=4;k>=1;k--)**

**{**

**for(l=1;l<=k;l++)**

**{**

**printf("\*");**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**\***

**\*\***

**\*\*\***

**\*\*\*\***

**\*\*\*\*\***

**\*\*\*\***

**\*\*\***

**\*\***

**\***

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**67)SAMPLE PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int a[10],i,even=0,odd=0;**

**printf("enter 10 no: \n");**

**for(i=0;i<10;i++)**

**{**

**scanf("%d",&a[i]);**

**if(a[i]%2==0)**

**even++;**

**else**

**odd++;**

**}**

**printf("even=%d,odd=%d",even,odd);**

**}**

**OUTPUT:**

**enter 10 no:**

**2**

**2**

**2**

**2**

**2**

**3**

**3**

**3**

**3**

**3**

**even=5,odd=5**

**68)SAMPLE PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int a[10],i,sum=0;**

**printf("enter 10 no: \n");**

**for(i=0;i<10;i++)**

**{**

**scanf("%d",&a[i]);**

**sum=sum+a[i];**

**}**

**printf("sum=%d",sum);**

**}**

**OUTPUT:**

**enter 10 no:**

**2**

**2**

**2**

**2**

**2**

**2**

**2**

**2**

**2**

**2**

**sum=20**

**69)SIMPLE PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int a[10],i,num=0;**

**printf("enter 10 no: \n");**

**for(i=0;i<10;i++)**

**{**

**scanf("%d",&a[i]);**

**if(a[i]==5)**

**{**

**num++;**

**}**

**}**

**printf("num=%d",num);**

**}**

**OUTPUT:**

**enter 10 no:**

**5**

**5**

**5**

**5**

**4**

**3**

**2**

**7**

**6**

**4**

**num=4**

**70)SIMPLE PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int a[10],i,sum=0,e\_even=0,o\_odd=0;**

**printf("Enter 10 num:\n");**

**for(i=0;i<10;i++)**

**{**

**scanf("%d",&a[i]);**

**if(a[i]%2==0)**

**{**

**e\_even=a[i]+e\_even;**

**}**

**else**

**{**

**o\_odd=o\_odd+a[i];**

**}**

**}**

**printf("%d%d",e\_even,o\_odd);**

**}**

**OUTPUT:**

**Enter 10 num:**

**2**

**2**

**2**

**2**

**2**

**3**

**3**

**3**

**3**

**3**

**10, 15**

**71)SIMPLE PROGRAM:**

**#include <stdio.h>**

**void sortArray(int arr[], int n)**

**{**

**int i, j, temp;**

**for (i = 0; i < n - 1; i++)**

**{**

**for (j = 0; j < n - i - 1; j++)**

**{**

**if (arr[j] > arr[j + 1])**

**{**

**temp = arr[j];**

**arr[j] = arr[j + 1];**

**arr[j + 1] = temp;**

**}**

**}**

**}**

**}**

**int main()**

**{**

**int arr[] = {4, 6, 8, 9, 2, 3, 5};**

**int n = 7;**

**sortArray(arr, n);**

**printf("Sorted array in ascending order:\n");**

**for (int i = 0; i < n; i++)**

**{**

**printf("%d ", arr[i]);**

**}**

**printf("\n");**

**return 0;**

**}**

**#include <stdio.h>**

**void sortArray(int arr[], int n)**

**{**

**int i, j, temp;**

**for (i = 0; i < n - 1; i++)**

**{**

**for (j = 0; j < n - i - 1; j++)**

**{**

**if (arr[j] > arr[j + 1])**

**{**

**temp = arr[j];**

**arr[j] = arr[j + 1];**

**arr[j + 1] = temp;**

**}**

**}**

**}**

**}**

**int main()**

**{**

**int arr[] = {4, 6, 8, 9, 2, 3, 5};**

**int n = 7;**

**sortArray(arr, n);**

**printf("Sorted array in ascending order:\n");**

**for (int i = 0; i < n; i++)**

**{**

**printf("%d ", arr[i]);**

**}**

**printf("\n");**

**return 0;**

**}**

**OUTPUT:**

**Sorted array in ascending order:**

**2 3 4 5 6 8 9**

**72)USER ENTER TWO NUMBER THAT NUMBERS SUM:**

**#include<stdio.h>**

**void main()**

**{**

**int a,b,sum=0;**

**printf("Enter two numbers:");**

**scanf("%d %d",&a,&b);**

**for(int i=a;i<=b;i++)**

**{**

**sum=sum+i;**

**}**

**printf("sum=%d",sum);**

**}**

**OUTPUT:**

**Enter two numbers:4**

**7**

**sum=22**

**73)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=5;i>=1;i--)**

**{**

**for(j=5;j>=1;j--)**

**{**

**printf("%d",j);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**54321**

**54321**

**54321**

**54321**

**54321**

**73)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=1;i<=5;i++)**

**{**

**for(j=1;j<=i;j++)**

**{**

**printf("%d",j);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**1**

**12**

**123**

**1234**

**12345**

**74)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i,j;**

**for(i=5;i>=1;i--)**

**{**

**for(j=1;j<=i;j++)**

**{**

**printf("%d",i);**

**}**

**printf("\n");**

**}**

**}**

**OUTPUT:**

**55555**

**4444**

**333**

**22**

**1**

**6/11/2024:**

**BITWISE OPERATORS:**

**75)PATTERN PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int a=2,b=4,c;**

**c=a&b;**

**printf("c=%d",c);**

**c=a|b;**

**printf("c=%d",c);**

**c=~a;**

**printf("c=%d",c);**

**c=a^b;**

**printf("c=%d",c);**

**c=a<<1;**

**printf("c=%d",c);**

**c=a>>1;**

**printf("c=%d",c);**

**}**

**OUTPUT:**

**c=0c=6c=-3c=6c=4c=1**

**76)SAMPLE PROGRAM:**

**USER ENTER NUMBER HOW MANY NUMBERS HIGH:**

**#include<stdio.h>**

**void main()**

**{**

**int a,count=0;**

**printf("Enter a number:");**

**scanf("%d",&a);**

**while(a>0)**

**{**

**if(a&1)**

**count++;**

**a=a>>1;**

**}**

**printf("%d",count);**

**}**

**OUTPUT:**

**Enter a number:6**

**2**

**77)SAMPLE PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**if(printf("hello"))**

**{**

**}**

**}**

**OUTPUT:**

**hello**

**78)SAMPLE PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**int i=5;**

**while(i--)**

**{**

**printf("hi\n");**

**}**

**}**

**OUTPUT:**

**hi**

**hi**

**hi**

**hi**

**hi**

**79)SAMPLE QUESTIONS:**

**#include <stdio.h>**

**// Function to check if two integers have the same or opposite signs**

**int checkSigns(int a, int b) {**

**// Extract the sign bits using right shift by 31**

**int signA = a >> 31;**

**int signB = b >> 31;**

**// XOR the sign bits; if the result is 0, they have the same sign**

**// If the result is 1, they have opposite signs**

**return (signA ^ signB) == 0; // Return 1 if same signs, 0 if opposite signs**

**}**

**int main() {**

**int num1, num2;**

**// Take input from the user**

**printf("Enter two integers: ");**

**scanf("%d %d", &num1, &num2);**

**// Check if they have the same or opposite signs**

**if (checkSigns(num1, num2)) {**

**printf("The two integers have the same sign.\n");**

**} else {**

**printf("The two integers have opposite signs.\n");**

**}**

**return 0;**

**}**

**OUTPUT:**

**Enter two integers: 5 -7**

**The two integers have opposite signs.**

**Enter two integers: -3 -8**

**The two integers have the same sign.**

**Enter two integers: 10 15**

**The two integers have the same sign.**

**80)SAMPLE PROGRAM:**

**WHAT IS OUTPUT:**

**#include<stdio.h>**

**void main()**

**{**

**int i;**

**for(i=-1;i<=10;i++)**

**{**

**if(i<5)**

**continue;**

**else**

**break;**

**printf("hi");**

**}**

**}**

**OUTPUT:**

**0**

**81)SAMPLE PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**float a=1.1;**

**double b=1.1;**

**if(a==b)**

**printf("hi");**

**else**

**printf("hello");**

**}**

**OUTPUT:**

**Hello**

**82)SAMPLE PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**printf("%d",printf("hai"));**

**}**

**OUTPUT:**

**Hai3**

**83)SAMPLE PROGRAM:**

**#include<stdio.h>**

**void main()**

**{**

**printf(1+"%d",4);**

**}**

**OUTPUT:**

**d4**