**MATRIC NO:18/SCI01/048**

1)

#include <stdio.h>

int main()

{

 int i;

 for ( i = 100; i >= 1; i -=3 )

 {

 printf("%d ",i);

 }

}

2)

#include <stdio.h>

int main()

{

 int j;

 printf("input:");

 scanf("%d",&j);

 for (int i = 0; i < 80; i++)

 {

 if (j > 59)

 break;

 else

 printf("\*");

 }

 printf("\n");

 return 0;

}

3)

 #include <stdio.h>

int main() {

 int n, i, flag = 0;

 printf("Enter a positive integer: ");

 scanf("%d", &n);

 for (i = 2; i <= n / 2; ++i) {

 // condition for non-prime

 if (n % i == 0) {

 flag = 1;

 break;

 }

 }

 if (n == 1) {

 printf("1 is neither prime nor composite.");

 }

 else {

 if (flag == 0)

 printf("%d is a prime number.", n);

 else

 printf("%d is not a prime number.", n);

 }

 return 0;

 }

4)

 #include<stdio.h>
int main()

{
 int i=1,f=1,num;

 printf("Enter a number: ");
 scanf("%d",&num);

 while(i<=num)

{
 f=f\*i;
 i++;
 }

 printf("Factorial of %d is: %d",num,f);
 return 0;
}

5)

#include<stdio.h>

int main()

{

 int n;

 n=50; // Initialize

 do

 {

 printf(" %d",n);

 n++;

 n+=7;

 }

 while(n<=1000);

 printf("\n");

return 0;

 }

6)

#include <stdio.h>

int main()

{

 char ch;

 printf("Enter any character: ");

 scanf("%c", &ch);

 if(ch=='a' || ch=='e' || ch=='i' || ch=='o' || ch=='u' ||

 ch=='A' || ch=='E' || ch=='I' || ch=='O' || ch=='U')

 {

 printf("'%c' is Vowel.", ch);

 }

 else if((ch >= 'a' && ch <= 'z') || (ch >= 'A' && ch <= 'Z'))

 {

 printf("'%c' is Consonant.", ch);

 }

 else

 {

 printf("'%c' is not an alphabet.", ch);

 }

 return 0;

}

7)

#include <stdio.h>

int main()

{

 int number, i,a;

 printf(" Enter any Number from 1-10:");

 scanf("%d", &number);

 printf("Enter the multiples:");

 scanf("%d",&a);

 printf("Multiplication table of %d:\n ", number);

 printf("--------------------------\n");

 for (i = 1;i <=a ;i++)

 {

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

 }

 return 0;

}

8)

#include <stdio.h>

int main()

{

 char q1,q2,q3,q4,q5,q6,q7,q8,q9,q10,q11;

 int a,b,c,d,e,f,g,h,i,j;

 printf("Question 1 & 2:");

 scanf("%c\n",&q1);

 printf("Question 3:");

 scanf("%c\n",&q2);

 printf("Question 4:");

 scanf("%c\n",&q3);

 printf("Question 5:");

 scanf("%c\n",&q4);

 printf("Question 6:");

 scanf("%c\n",&q5);

 printf("Question 7:");

 scanf("%c\n",&q6);

 printf("Question 8:");

 scanf("%c\n",&q7);

 printf("Question 9:");

 scanf("%c\n",&q8);

 printf("Question 10:");

 scanf("%c\n",&q9);

 printf("Total");

 scanf("%c",&q10);

 switch(q1)

 {

 case 'A':

 a = 3;

 break;

 case 'B':

 a = 1;

 break;

 case 'C':

 a = 2;

 break;

 }

 switch(q2)

 {

 case 'A':

 b = 3;

 break;

 case 'B':

 b = 1;

 break;

 case 'C':

 b = 2;

 break;

 }

 switch(q3)

 {

 case 'A':

 c = 3;

 break;

 case 'B':

 c = 1;

 break;

 case 'C':

 c = 2;

 break;

 }

 switch(q4)

 {

 case 'A':

 d = 3;

 break;

 case 'B':

 d = 1;

 break;

 case 'C':

 d = 2;

 break;

 }

 switch(q5)

 {

 case 'A':

 e = 3;

 break;

 case 'B':

 e = 1;

 break;

 case 'C':

 e = 2;

 break;

 }

 switch(q6)

 {

 case 'A':

 f = 3;

 break;

 case 'B':

 f = 1;

 break;

 case 'C':

 f = 2;

 break;

 }

 switch(q7)

 {

 case 'A':

 g = 3;

 break;

 case 'B':

 g = 1;

 break;

 case 'C':

 g = 2;

 break;

 }

 switch(q8)

 {

 case 'A':

 h = 3;

 break;

 case 'B':

 h = 1;

 break;

 case 'C':

 h = 2;

 break;

 }

 switch(q9)

 {

 case 'A':

 i = 3;

 break;

 case 'B':

 i = 1;

 break;

 case 'C':

 i = 2;

 break;

 }

 switch(q10)

 {

 case 'A':

 j = 3;

 break;

 case 'B':

 j = 1;

 break;

 case 'C':

 j = 2;

 break;

 }

 printf(" score:%d\n",a+b+c+d+e+f+g+h+i+j);

 return 0;

}

9)

# include <stdio.h>

int main(){

 int i,num,product;

 for(i=1,product=1;i<=8;++i){

 printf("Enter num%d:",i);

 scanf("%d",&num);

 if(num==0)

 {

 continue;

 }

 product\*=num;

}

 printf("product=%d",product);

return 0;

}

10)

#include<stdio.h>

 int main()

{

int count=1,year\_num;

float Rate;

unsigned long CurrentYr;

unsigned long NextYr;

while (count<=1)

{

 printf("Enter the initial population: ");

 scanf("%d",&CurrentYr);

 printf("Enter the rate: ");

 scanf("%f",&Rate);

 printf("Year Population\n");

 printf("---- ----------\n");

 if ((CurrentYr>0 && CurrentYr<10000000000) && (Rate>0 && Rate<10))

 {

 NextYr = CurrentYr;

 for(year\_num=0;year\_num<=25;year\_num++)

 {

 NextYr = Rate \* NextYr \* (1-NextYr/10000000000);

 printf("%4d%12d\n",year\_num,NextYr);

 }

 break;

 }

 else if ((CurrentYr < 0 || CurrentYr > 10000000000) || (Rate<0 || Rate>10))

 {

 printf("Invalid Input!");

 printf("Enter the initial population: ");

 scanf("%d",&CurrentYr);

 printf("Enter the rate: ");

 scanf("%f",&Rate);

 }

 if ((CurrentYr>0 && CurrentYr<10000000000) && (Rate>0 && Rate<10))

 {

 NextYr = CurrentYr;

 for(year\_num=0;year\_num<=25;year\_num++)

 {

 printf("%4d%12d\n",year\_num,NextYr);

 NextYr = Rate \* NextYr \* (1-NextYr/100000000);

 }

 break;

 }

}

return 0;

}