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1. Write a program in C to find the factorial of a given number.

```
#include<stdio.h>

#include<conio.h>

int main()

{

clrscr();

long int i, fact=1, int No;

printf("Enter the number:");

scanf("%d", &No);

for(i=1; i<=No; i++)

fact=fact*i;

printf("\n The factorial is :%d", fact);

getch();

return 0;

}
```

2. Write a program in C to check whether the given number is prime or not.

```
#include<stdio.h>

#include<conio.h>

int main()

{

clrscr();
```

```
int no, l, flag=1;

printf("Enter the number:");

scanf("%d", &no);

goto l;

for(i=2; i<no ; i++)

if(no % i==0)

{

flag=0;

break;

}

if (flag==1)

printf("\n prime");

else

l: printf("\n not prime");

getch();

return 0;

}
```

3. Write a program in C to find the summation of Even numbers between 1 to 100.

```
#include<stdio.h>

#include<conio.h>

int main()
```

```
{  
clrscr();  
int i, sum =0;  
for(i=1 ; i<=100 ; i++)  
if(i%2 == 0)  
sum = sum + i;  
printf("The summation of even number is: %d", sum);  
getch();  
return 0;  
}
```

4. Write a program in C to find the maximum number and its position in an array from the given numbers.

```
#include<stdio.h>  
#include<conio.h>  
int main()  
{  
clrscr();  
int i,max,pos,n,a[100];  
printf("How many numbers do you want?:");  
scanf("%d",&n);  
printf("\n Enter the numbers:");  
for(i=1; i<=n; i++)
```

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

max=a[1];

pos=1;

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

if(max<a[i])

{

max = a[i];

pos= i;

}


printf("\n The maximum number and its position are:%d%d",max,pos);


getch();

return 0;

}
```

5. Write a program in C to find the summation of prime numbers between 1 to 100.

```
#include<stdio.h>

#include<conio.h>

int main()

{

clrscr();
```

```
int i, j, flag, sum = 0;

for(i=2; i<=100; i++)
{
    flag=1;
    for(j=2; j<i; j++)
        if(i%j == 0)
        {
            flag=0;
            break;
        }
    if (flag == 1)
        sum=sum+i;
}

printf("The summation of prime numbers :%d",sum);

getch();

return 0;

}
```

6. Write a program in C to arrange the numbers in ascending order.

```
#include<stdio.h>

#include<conio.h>

int main()

{
```

```

clrscr();

int no, i, j, temp, a[100];

printf("How many numbers do you want ?:");

scanf("%d",&no);

printf(" Enter the numbers:");

for(i=1; i<=no; i++)
scanf("%d",&a[i]);

for(i=1; i<=no; i++)
for(j=i+1; j<=no; j++)
if( a[i] > a[j] )
{
temp = a[j];
a[j] = a[i];
a[i] = temp;
}

printf("\n The  ascending numbers are :");

for(i=1; i<=no; i++)
printf("\n%d",a[i]);

getch();

return 0;

}

```

7. Write a program in C to count the number of vowels, consonant and blank spaces in a sentence.

```
#include<stdio.h>

#include<conio.h>

#include<ctype.h>

int main()

{

clrscr();

int v=0, c=0, b=0, i, n;

char s[100];

printf("Enter the sentence");

gets(s);

n = strlen(s);

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

{

s[i] = tolower s[i];

if(s[i]=='a' || s[i]=='e' || s[i]=='i' || s[i]=='o' || s[i]=='u')

v = v+1;

else if( s[i] == ' ')

b = b+1;

else

c = c+1;

}

printf("\n The vowel is %d \n The consonant is %d \n The blank space is %d ",v
, c, b);
```

```
getch();  
  
return 0;  
  
}
```

8. Write a program in C to transpose a matrix spaces in sentence.

```
#include<stdio.h>  
  
#include<conio.h>  
  
int main()  
{  
  
clrscr();  
  
int a[5][5] , i, j, n;  
  
printf(" Enter the row and column size:");  
  
scanf("%d %d",&n);  
  
printf("\n Enter the elements of a matrix:");  
  
for(i=1; i<=n; i++)  
for(j=1; j<=n; j++)  
scanf("%d", & a[i] [j] );  
  
printf("\n The transpose of a matrix is:");  
  
for(i=1; i<=n; i++)  
{  
for(j=1; j<=n; j++)  
printf("%5d", a[j] [i]);  
  
printf("\n");  
}
```

```
}  
  
getch();  
  
return 0;  
  
}
```

9. Write a program in C for matrix addition.

```
#include<stdio.h>  
  
#include<conio.h>  
  
int main()  
{  
  
int a[4][4], b[4][4], c[4][4], i, j, n;  
  
printf("Enter the number of rows and columns : ");  
  
scanf("%d ", &n);  
  
printf("\n Enter the element of 1st matrix");  
  
for(i=1; i<=n ; i++)  
for(j=1; j<=n; j++)  
scanf("%d", &a[i] [j] );  
  
printf("\n Enter the elements of 2nd matrix");  
  
for(i=1; i<=n; i++)  
for(j=1; j<=n; j++){  
scanf("%d",&b[i] [j]);  
  
printf(" \n Enter the elements of 3rd matrix");  
  
for(i=1; i<=n; i++)
```

```

for(j=1; j<=n; j++)

c[i] [j]= a[i] [j] + b[i] [j];

printf("\n The matrix addition is :");

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

{

for (j=1 ; j<=n; j++)

printf("%5d", c [i] [j]);

printf("\n");

}

getch();

return 0;

}

```

10. Write a program in C for matrix multiplication.

```

#include<stdio.h>

#include<conio.h>

int main()

{

clrscr();

int i, j, k, n, a [4] [4], b [4] [4], c [4] [4];

printf("Enter the number of rows and columns : ");

scanf("%d",& n);

printf("\n Enter the elements of 1st matrix");

```

```

for(i=1; i<=n; i++)
for(j=1; j<=n; j++){
scanf("%d",&a[i] [j] );
printf("\n Enter the elements of 2nd matrix ");
for(i=1; i<=n; i++)
for(j=1; j<=n; j++)
scanf("%d",& b[i] [j]);
printf("\n Enter the elements of 3rd matrix" );
for(i=1; i<=n; i++)
for(j=1; j<=n; j++) {
c[i] [j] = 0;
for(k=1; k<=n; k++)
c[i] [j] = c[i] [j] + a [i] [k]* b[k] [j];
}
printf(" \n The matrix multiplication is:");
for(i=1; i<=n; i++) {
for(j=1; j<=n; j++)
printf("%5d", c[i] [j]);
printf("\n"); }
getch();
return 0;
}

```