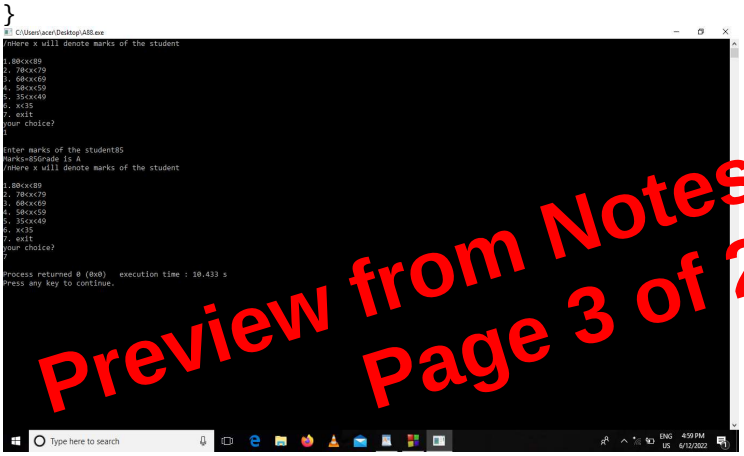
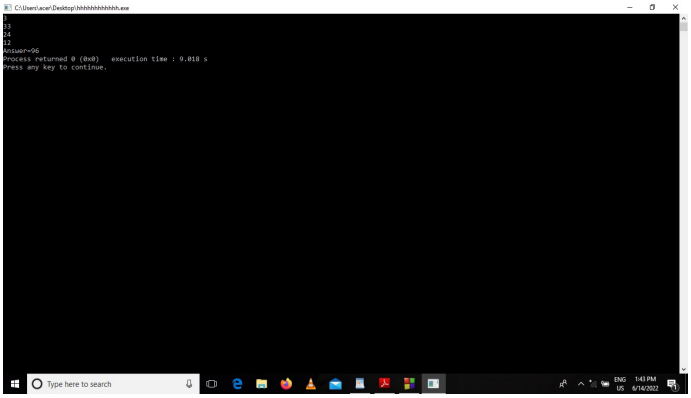
```
            break;
        case 4:
            printf("\nEnter marks of the student");
            scanf("%d",&x);
            printf("Marks=%d",x);
            printf("Grade is D\n");
            break;
        case 5:
            printf("\nEnter marks of the student");
            scanf("%d",&x);
            printf("Marks=%d",x);
            printf("Grade is P\n");
            break;
        case 6:
            printf("\nEnter marks of the student");
            scanf("%d",&x);
            printf("Marks=%d",x);
            printf("Grade is F\n");
            break;
        case 7:
            exit(0);
        default:
            printf("Wrong choice!\n");
    }
}
return 0;
}
```



3. No income tax is to be paid if income is less than 5000. If income is between 5000 and 6000 then tax is 10% of the amount by which the income exceeds 5000. If income is between 6000 and 15000 then the tax is 100 + 20% of the amount by which the income exceeds 6000. If income is more than 15000 then the tax is 1900 + 30% of the amount by which the income exceeds 15000. e.g., if income is 10000 then the tax will be 100 + (10000 − 6000) ∗ 20/100 = 900. Write a program, which reads income and calculates the income tax.

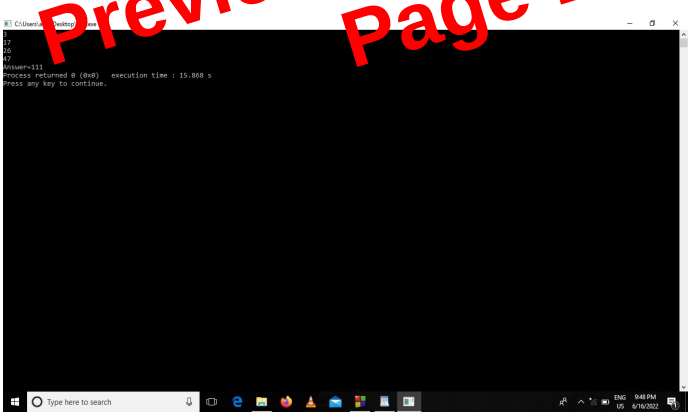
```
#include<stdio.h>
#include<stdlib.h>
int main()
{

int choice,x,y;
while(1)
{
```



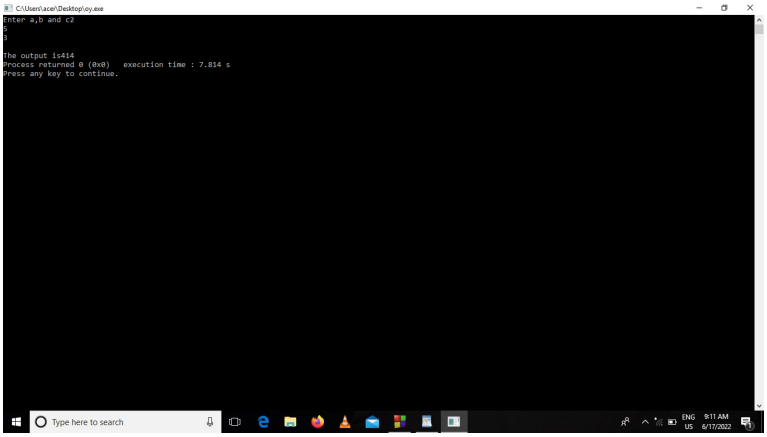
5. Write program, which finds sum of numbers after incrementing every even digit.

```
#include<stdio.h>
main( )
{ int n,i,u,v,w,t,sum,digit,x;
scanf("%d",&n);
sum=0;
for (i=1;i<=n;i++)
{ scanf("%d",&x);
{
u=x/10;
v=x%10;
if(u%2==0)
u=u+1;
if(v%2==0)
    v=v+1;
x=(u*10)+v;
{
sum=sum+x;}
}
}
printf("Answer=%d",sum);
}
```

6. Write program, which finds the sum of the biggest digit

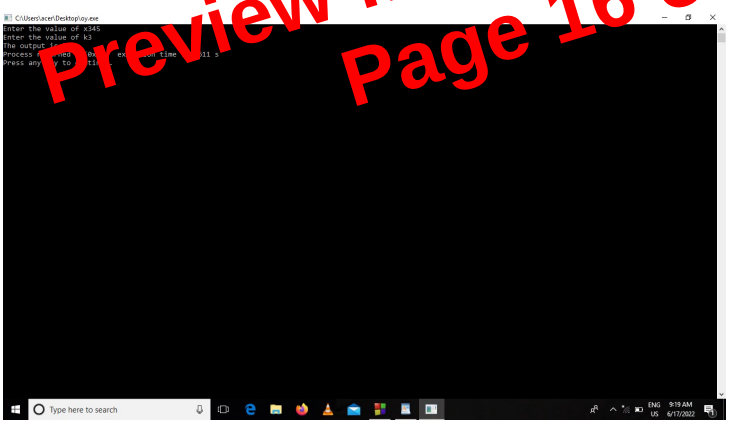
```
#include<stdio.h>
```



12. Write program, which reads numbers x and k and finds k–th (integer) root of x

```
#include<stdio.h>
#include<math.h>
int main(void)
{
int x,k,i;
printf("Enter the value of x");
scanf("%d",&x);
printf("Enter the value of k");
scanf("%d",&k);
for( i=0;i<x;i++)
{
    if(x>pow(i,k)&&x<pow((i+1),k));
    {

    printf("The output is=%d",i);
    break;}
    }
}
```

13. Write program, which reads two numbers and computes output in the following manner.

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

```
for(i=0;i<n;i++)
        scanf("%f",&b[i]);
for(i=0;i<n;i++)
        x[i]=0;
//checking for row dominance
flag=0;
for(i=0;i<n;i++)
{
        sum=0;
        for(j=0;j<n;j++)
                if(i!=j)
                        sum+=fabs(a[i][j]);
                if(sum>fabs(a[i][i]))
                        flag=1;
}
//checking for column dominance
if(flag==1)
        flag=0;
for(j=1;j<n;j++)
{
        sum=0;
        for(i=1;i<n;i++)
                if(i!=j)
                        sum+=fabs(a[i][j]);
                if(sum>fabs(a[j][j]))
                        flag=1;
}
if(flag==1)
{
        printf("The coefficient matrix is not diagonally dominant \n");
        printf("The Gauss-Jacobi method does not converge surely");
        exit(0);
}
for(i=0;i<n;i++)
        printf(" x[%d] ",i);
printf("\n");
do
{
        for(i=0;i<n;i++)
        {
                sum=b[i];
                for(j=0;j<n;j++)
                        if(j!=i)
                                sum-=a[i][j]*x[j];
                        xn[i]=sum/a[i][i];
        }
        for(i=0;i<n;i++)
                printf("%8.5f ",xn[i]);
        printf("\n");
        flag=0;
        //indicates |x[i]-xn[i]|<epp for all i
        for(i=0;i<n;i++)
                if(fabs(x[i]-xn[i])<epp)
                        flag=1;
        if(flag==1)
                for(i=1;i<n;i++)
                        x[i]=xn[i]; //reset x[i]
}while(flag==1);
```