

1. Write a C program to check whether a number is negative, positive or zero.

```
1  #include <stdio.h>
2
3  int main()
4  {
5      int num;
6      scanf("%d",&num);
7      if(num==0)
8      {
9          printf("%d is equal to Zero\n",num);
10     }
11     else if(num<0)
12     {
13         printf("%d is a negative number\n",num);
14     }
15     else
16     {
17         printf("%d is a positive number\n",num);
18     }
19 }
20
```

Output:

```
-6
-6 is a negative number
```

```
Process returned 0 (0x0)    execution time : 3.880 s
Press any key to continue.
```

2. Write a C program to check whether a year is leap year or not.

```
1  #include <stdio.h>
2
3  int main()
4  {
5      int yr;
6      scanf("%d",&yr);
7      if(yr%400==0 || yr%4==0 && yr%100!=0)
8      {
9          printf("%d is a leap year\n",yr);
10     }
11     else
12     {
13         printf("%d is not a leap year\n",yr);
14     }
15 }
16
```

Output:

```
2020
2020 is a leap year
```

```
Process returned 0 (0x0)   execution time : 5.793 s
Press any key to continue.
```

3. Write a C program to input any character and check whether it is alphabet, digit or special character.

```
1  #include <stdio.h>
2
3  int main()
4  {
5      char ch;
6      ch = getchar();
7      if(ch>='A'&&ch<='Z' || ch>='a'&&ch<='z')
8      {
9          printf("%c is an Alphabet\n",ch);
10     }
11     else if(ch>='0'&&ch<='9')
12     {
13         printf("%c is a Digit\n",ch);
14     }
15     else
16     {
17         printf("%c is a special character\n",ch);
18     }
19 }
20
```

Output:

```
?
? is a special character

Process returned 0 (0x0)    execution time : 2.303 s
Press any key to continue.
```

4. Write a C program to input any alphabet and check whether it is vowel or consonant.

```
1  #include <stdio.h>
2
3  int main()
4  {
5      char ch;
6      ch=getchar();
7      if(ch>='A'&&ch<='Z' || ch>='a'&&ch<='z')
8      {
9          if(ch=='A' || ch=='E' || ch=='I' || ch=='O' || ch=='U' || ch=='A' || ch=='a' || ch=='e' || ch=='i' || ch=='o' || ch=='u')
10         {
11             printf("%c is vowel\n",ch);
12         }
13         else
14         {
15             printf("%c is consonant\n",ch);
16         }
17     }
18 }
19
```

Output:

```
J
J is consonant
```

Process returned 0 (0x0) execution time : 2.713 s  
Press any key to continue.

5. Write a C program to input all sides of a triangle and check whether triangle is valid or not.

```
1  #include <stdio.h>
2  int main()
3  {
4      int a,b,c;
5      scanf ("%d%d%d", &a, &b, &c);
6      if (a+b>c&&b+c>a&&c+a>b)
7      {
8          printf("Valid Triangle\n");
9      }
10     else
11     {
12         printf("Not Valid Triangle\n");
13     }
14 }
15
```

Output:

```
4
7
9
Valid Triangle

Process returned 0 (0x0)    execution time : 3.889 s
Press any key to continue.
■
```

6. Write a C program to input marks of five subjects Physics, Chemistry, Biology, Mathematics and Computer. Calculate percentage and grade according to following:

```
1  #include <stdio.h>
2  int main()
3  {
4      int phy, che, math, bio, com, perc;
5      scanf ("%d%d%d%d%d", &phy, &che, &math, &bio, &com);
6      perc= (phy+che+math+bio+com) /5;
7      if (perc>=90)
8      {
9          printf ("Grade A\n");
10     }
11     else if (perc>=80)
12     {
13         printf ("Grade B\n");
14     }
15     else if (perc>=70)
16     {
17         printf ("Grade C\n");
18     }
19     else if (perc>=60)
20     {
21         printf ("Grade D\n");
22     }
23     else if (perc>=40)
24     {
25         printf ("Grade E\n");
26     }
27     else if (perc>=0)
28     {
29         printf ("Grade F\n");
30     }
31     else
32     {
33         printf ("Invalid Value\n");
34     }
35 }
36
```

Output:

93  
98  
99  
70  
85  
Grade B

Process returned 0 (0x0) execution time : 7.742 s  
Press any key to continue.