# PrepInsta

# TCS Coding Question 2 | Given a maximum of four digit to the base 17 (10 – A …

## Sweet Seventeen Problem Statement

Given a maximum of four digit to the base 17 (10 – A, 11 – B, 12 – C, 13 – D … 16 – G} as input, output its decimal value.

| Test Cases |
| --- |

Case 1

- Input – 1A
- Expected Output – 27

Case 2

- Input – 23GF
- Expected Output – 10980

**C Program**

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

int main(){

  char hex[17];
  long long decimal, place;

  int i = 0, val, len;
  decimal = 0;
  place = 1;

  scanf("%s",hex);

  len = strlen(hex);
  len--;

  for(i = 0;hex[i]!='\0';i++)
  {
    if(hex[i]>='0'&& hex[i]<='9'){

      //48 to 57 are ascii values of 0 - 9
      //say value is 8 its ascii will be 56
      //val = hex[i] - 48 => 56 - 48 => val = 8

      val = hex[i] - 48;
    }
    else if(hex[i]>='a'&& hex[i]<='g'){

      //97 to 103 are ascii values of a - g
      //say value is g its ascii will be 103
      //val = hex[i] - 97 + 10 => 103 - 97 + 10=> val = 16
      //10 is added as g value is 16 not 6 or a value is 10 not 0

      val = hex[i] - 97 + 10;
    }
    else if(hex[i]>='A'&& hex[i]<='G'){

      //similarly, 65 to 71 are values of A - G
      val = hex[i] - 65 + 10;
    }

    decimal = decimal + val * pow(17,len);
    len--;
  }

  printf("%lld",decimal);

  return 0;
}
```

C++

Python

**Very Important**

- Coding Question 1
- Coding Question 2
- Coding Question 3
- Coding Question 4
- Coding Question 5
- Coding Question 6
- Coding Question 7
- Coding Question 9
- Coding Question 10

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**apoorv1498** #include

using namespace std; int main(){

string s;

cin>>s;

int dec = 0;

int k = s.length()-1;

for(int i=0; i<s.length(); i++){

char ch = s[i];

if(ch=='A'){

dec = dec + 10*pow(17,k);

k–;

}

else if(ch=='B'){

dec = dec + 11*pow(17,k);

k–;

}

else if(ch=='C'){

dec = dec + 12*pow(17,k);

k–;

}

else if(ch=='D'){

dec = dec + 13*pow(17,k);

k–;

}

else if(ch=='E'){

dec = dec + 14*pow(17,k);

k–;

}

else if(ch=='F'){

dec = dec + 15*pow(17,k);

```
k–;
}
else if(ch=='G'){
dec = dec + 16*pow(17,k);
k–;
}
else{
dec = dec + (int(s[i])-48)*pow(17,k);
k–;
}
}
cout<<dec;
}
```

**Jatin** /*Little bit lengthy But easy Explanation */

```
import java.util.*;
public class Main {
public static void main(String args[]) {
String str = "23GF";
HashMaphmap = new HashMap() ;
hmap.put('A',10) ;
hmap.put('B',11) ;
hmap.put('C',12) ;
hmap.put('D',13) ;
hmap.put('E',14) ;
hmap.put('F',15) ;
hmap.put('G',16) ;
hmap.put('H',17) ;
hmap.put('0',0) ;
hmap.put('1',1) ;
hmap.put('2',2) ;
hmap.put('3',3) ;
hmap.put('4',4) ;
hmap.put('5',5) ;
hmap.put('6',6) ;
hmap.put('7',7) ;
hmap.put('8',8) ;
hmap.put('9',9) ; int k = 0 ;
int ans1 = 0;
for(int i = str.length()-1 ; i>=0 ;i–){
char ch = str.charAt(i) ;
if(hmap.containsKey(ch)){
int ans = hmap.get(ch) ;
ans1 = ans1 + ans*(int)Math.pow(17,k) ;
k++ ;
}
}
```

```
System.out.print(ans1) ; }
}
```

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