CS23331-Design and Analysis of Algorithms-2024 Batch-CSE, IT, AIML & AIDS

Started on	Saturday, 2 August 2025, 9:01 AM
State	Finished
Completed on	Sunday, 10 August 2025, 12:03 PM
Time taken	8 days 3 hours
Marks	15.00/15.00
Grade	**100.00** out of 100.00

Question 1 | Correct Mark 1.00 out of 1.00 Flag question

Given two numbers, write a C program to swap the given numbers.

For example:

Input	Result
10 20	20 10

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main(){
    int a;
    int b;
    scanf("%d %d ",&a,&b);
    int temp=a;
    a=b;
    b=temp;
    printf("%d %d",a,b);
}
```

	Input	Expected	Got	
✔	10 20	20 10	20 10	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question 2 | Correct Mark 1.00 out of 1.00 Flag question

Write a C program to find the eligibility of admission for a professional course based on the following criteria:

Marks in Maths >= 65

Marks in Physics >= 55

Marks in Chemistry >= 50

Or

Total in all three subjects >= 180

Marks in Maths >= 65

Marks in Physics >= 55

Marks in Chemistry >= 50

Or

Total in all three subjects >= 180

Sample Test Cases

Test Case 1

Input

70 60 80

Output

The candidate is eligible

Test Case 2

Input

50 80 80

Output

The candidate is eligible

Test Case 3

Input

50 60 40

Output

The candidate is not eligible

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main(){
    int a,b,c;
    scanf("%d %d %d",&a,&b,&c);
    if(a+b+c>=180){
        printf("The candidate is eligible");
    }
    else{
        printf("The candidate is not eligible");
    }
}
```

	Input	Expected	Got	
✔	70 60 80	The candidate is eligible	The candidate is eligible	✔
✔	50 80 80	The candidate is eligible	The candidate is eligible	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question 3 | Correct Mark 1.00 out of 1.00 Flag question

Malini goes to BestSave hyper market to buy grocery items. BestSave hyper market provides 10% discount on the bill amount B when ever the bill amount B is more than Rs.2000.

The bill amount B is passed as the input to the program. The program must print the final amount A payable by Malini.

Input Format:

The first line denotes the value of B.

Output Format:

The first line contains the value of the final payable amount A.

Example Input/Output 1:

Input:

1900

Output:

1900

Example Input/Output 2:

Input:

3000

Output:

2700

Answer: (penalty regime: 0 %)

	Input	Expected	Got	
✔	1900	1900	1900	✔
✔	3000	2700	2700	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question 4 | Correct Mark 1.00 out of 1.00 Flag question

Baba is very kind to beggars and every day Baba donates half of the amount he has when ever a beggar requests him. The money M left in Baba's hand is passed as the input and the number of beggars B who received the alms are passed as the input. The program must print the money Baba had in the beginning of the day.

Input Format:

The first line denotes the value of M.
The second line denotes the value of B.

Output Format:

The first line denotes the value of money with Baba in the beginning of the day.

Example Input/Output:

Input:

100
2

Output:

400

Explanation:

Baba donated to two beggars. So when he encountered second beggar he had 100*2 = Rs.200 and when he encountered 1st he had 200*2 = Rs.400.

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main(){
    int B,M;
    scanf("%d %d",&M,&B);
    int c=(B*M)*2;
    printf("%d",c);
}
```

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The first line denotes the value of I.
The second line denotes the value of N.

Output Format:

The first line denotes the value of P.

Example Input/Output:

Input:

500
3

Output:

2100

Explanation:

On Monday the employee receives Rs.500, on Tuesday Rs.700, on Wednesday Rs.900

So total = Rs.2100

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main(){
    int a,b,t=0;
    scanf("%d %d",&a,&b);
    for(int i=0;i<b;i++){
        t+=a+(i*200);
    }
    printf("%d",t);
    return 0;
}
```

	Input	Expected	Got	
✔	500 3	2100	2100	✔
✔	100 3	900	900	✔

Passed all tests! ✔

Question 6 | Correct Mark 1.00 out of 1.00 Flag question

Two numbers M and N are passed as the input. A number X is also passed as the input. The program must print the numbers divisible by X from N to M (inclusive of M and N).

Input Format:

The first line denotes the value of M
The second line denotes the value of N
The third line denotes the value of X

Output Format:

Numbers divisible by X from N to M, with each number separated by a space.

Boundary Conditions:

1 <= M <= 9999999
M < N <= 9999999
1 <= X <= 9999

Example Input/Output 1:

Input:
2
40
7

Output:
35 28 21 14 7

Example Input/Output 2:

Input:
66
121
11

Output:
121 110 99 88 77 66

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main(){
    int m,n,x;
    scanf("%d %d %d",&m,&n,&x);
    if(m<n){
        for(int i=n;i>=m;i--){
            if(i%x==0){
                printf("%d ",i);
            }
        }
    }else{
        for(int i=m;i>=n;i--){
            if(i%x==0){
                printf("%d ",i);
            }
        }
    }
    return 0;
}
```

	Input	Expected	Got	
✔	2 40 7	35 28 21 14 7	35 28 21 14 7	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question 7 | Correct Mark 1.00 out of 1.00 Flag question

Write a C program to find the quotient and reminder of given integers.

For example:

Input	Result
12 3	4 0

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main(){
    int a,b;
    scanf("%d %d",&a,&b);
    int c=a/b;
    printf("%d\n",c);
    int d=a%b;
    printf("%d",d);
}
```

	Input	Expected	Got	
✔	12 3	4 0	4 0	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question 8 | Correct Mark 1.00 out of 1.00 Flag question

Write a C program to find the biggest among the given 3 integers?

For example:

Input	Result
10 20 30	30

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main(){
    int a,b,c;
    scanf("%d %d %d",&a,&b,&c);
   if(a>b&&a>c){
       printf("%d",a);
   }
   else if(b>c&&b>c){
       printf("%d",b);
   }
   else{
       printf("%d",c);
   }

}
```

	Input	Expected	Got	

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	Input	Expected	Got	
✔	10 20 30	30	30	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question 9 | Correct Mark 1.00 out of 1.00 Flag question

Write a C program to find whether the given integer is odd or even?

For example:

Input	Result
12	Even
11	Odd

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main(){
    int a;
    scanf("%d",&a);
    if(a%2==0){
        printf("Even");
    }
    else{
        printf("Odd");
    }
}
```

	Input	Expected	Got	
✔	12	Even	Even	✔
✔	11	Odd	Odd	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question 10 | Correct Mark 1.00 out of 1.00 Flag question

Write a C program to find the factorial of given n.

For example:

Input	Result
5	120

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main(){
    int a;
    unsigned long long fact=1;
    scanf("%d",&a);
    for(int i=1;i<=a;i++){
        fact=fact*i;
    }
    printf("%llu",fact);
    return 0;
}
```

Question 10 | Correct Mark 1.00 out of 1.00 Flag question

Write a C program to find the factorial of given n.

For example:

Input	Result
5	120

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main(){
    int a;
    unsigned long long fact=1;
    scanf("%d",&a);
    for(int i=1;i<=a;i++){
        fact=fact*i;
    }
    printf("%llu",fact);
    return 0;
}
```

	Input	Expected	Got	
✔	5	120	120	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question 11 | Correct Mark 1.00 out of 1.00 Flag question

Write a C program to find the sum first N natural numbers.

For example:

Input	Result
3	6

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main(){
    int n;
    scanf("%d",&n);
    int a=n*(n+1)/2;
    printf("%d",a);
}
```

	Input	Expected	Got	
✔	3	6	6	✔

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main(){
    int n;
    scanf("%d",&n);
    int a=n*(n+1)/2;
    printf("%d",a);
}
```

	Input	Expected	Got	
✔	3	6	6	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question 12 | Correct Mark 1.00 out of 1.00 Flag question

Write a C program to find the Nth term in the fibonacci series.

For example:

Input	Result
0	0
1	1
4	3

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main(){
    int n,i;
    int a=0,b=1,sum=0;
    scanf("%d",&n);
    if(n==0){
        sum=0;
    }
    else if(n==1){
        sum=1;
    }
    else{
        for(i=2;i<=n;i++){
            sum=a+b;
            a=b;
            b=sum;
        }
    }
    printf("%d",sum);
}
```

	Input	Expected	Got	
✔	0	0	0	✔
✔	1	1	1	✔
✔	4	3	3	✔

Passed all tests! ✔

Correct

Question 13 | Correct Mark 1.00 out of 1.00 Flag question

Write a C program to find the power of integers.

input:

a b

output:

a^b value

For example:

Input	Result
2 5	32

Answer: (penalty regime: 0 %)

```
#include<stdio.h>
int main(){
    int a,b,i,result=1;
    scanf("%d %d",&a,&b);
   for(i=0;i<b;i++){
       result=result*a;
   }
    printf("%d",result);
}
```

	Input	Expected	Got	
✔	2 5	32	32	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

```c
int main(){
    int n,i,flag=1;
    scanf("%d",&n);
    if(n<=1){
        flag=0;
    }
    else
    {
        for(i=2;i<=n/2;i++){
            if(n%i==0){
                flag=0;
                break;
            }
        }
    }
    if(flag==1)
       printf("Prime");
    else
       printf("No Prime");
}
```

	Input	Expected	Got	
✔	7	Prime	Prime	✔
✔	9	No Prime	No Prime	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question 15 | Correct Mark 1.00 out of 1.00 Flag question

Write a C program to find the reverse of the given integer?

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main(){
    int a,rev=0;
    scanf("%d",&a);
    while(a!=0){
        int digit=a%10;
        rev=rev*10+digit;
        a=a/10;

    }
    printf("%d",rev);
}
```

	Input	Expected	Got	
✔	123	321	321	✔

Passed all tests! ✔