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ECE-D

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ProblemStatement1:

Thisisasimplechallengetohelpyoupracticeprintingtostdout.We're startingoutbyprintingthemostfamouscomputingphraseofalltime!In theeditorbelow,useeitherprintforcouttoprintthestringHello,World! tostdout.

InputFormat

Youdonotneedtoreadanyinputinthischallenge. OutputFormat

PrintHello,World!tostdout.

SampleOutput1

Hello,World!

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main () {
    printf ("Hello, World!");
    return 0;

}
```

	Expected	Got	
✓	Hello, World!	Hello, World!	✓

Passed all tests! ✓

ProblemStatement2:

Thischallengewillhelpyoutolearnhowtotakeacharacter,astringanda sentenceasinputinC.Totakeasinglecharacterchasinput,youcanuse scanf("%c", &ch); and printf("%c", ch) writes a character specified by the argumentchartostdout:charch;scanf("%c",&ch);printf("%c",ch);

Thispieceofcodeprintsthecharacterch.YoucantakeastringasinputinC using scanf("%s", s). But it accepts string only until it finds the first space. In ordertotakealineasinput,youcanusescanf("%[^\n]%*c",s);wheresis definedaschars[MAX_LEN]whereMAX_LENisthemaximumsizeofs.

Here, [] is the scanset character. ^\n stands for taking input until a newline isn'tencountered.Then,withthis%*c,itreadsthenewlinecharacterand here,theused*indicatesthatthisnewlinecharacterisdiscarded.Note: Afterinputtingthecharacterandthestring,inputtingthesentencebythe abovementionedstatementwon'twork.Thisisbecause,attheendofeach line,anewlinecharacter(\n)ispresent.So,thestatement:scanf("%[^\n] %*c", s); will not work because the last statement will read a newline characterfromthepreviousline.Thiscanbehandledinavarietyofways andoneofthembeing:scanf("\n");beforethelaststatement.

Task:Youhavetoprintthecharacter,ch,inthefirstline.Thenprintsinnext line.Inthelastlineprintthesentence,sen.

InputFormat

First, take a character, ch as input. Then take the string, s as input. Lastly, take the sentence sen as input

OutputFormat

Printthreelinesofoutput.Thefirstlineprintsthecharacter,ch.Thesecond lineprintsthestring,s.Thethirdlineprintsthesentence,sen.

SampleInput1 C

program Programming

using C

SampleOutput1 C

program Programming

using C

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
#include<string.h>
int main () {
    char ch;
    char s[100];
    char sen[200];
    scanf (" %c",&ch);
    scanf ("%s",&s[100]);
    scanf("\n");
    scanf (" %[^\n]%*c",&sen[200]);
    printf("%c\n",ch);
    printf("%s\n",s);
    printf("%s\n",sen);
    return 0;
}
```

	Input	Expected	Got	
✓	c	c	c	✓

Passed all tests! ✓

ProblemStatement3:

Thefundamentaldatatypesincareint,floatandchar.Today,we're discussingintandfloatdatatypes.

Theprintf()functionprintsthegivenstatementtotheconsole.Thesyntaxis printf("format string",argument_list);. In the function, if we are using an integer,character,stringorfloatasargument,theninttheformatstringwe havetowrite%d(integer),%c(character),%s(string),%f(float) respectively. The scanf() function reads the input data from the console. The syntax is scanf("format string",argument_list);. For ex: The scanf("%d",&number)statementreadsintegernumberfromtheconsole andstoresthegivenvalueinvariablenumber.Toinputtwointegers separated by a space on a single line, the command is scanf("%d %d", &n, &m),wherenandmarethetwointegers.

Task

Yourtaskistotaketwonumbersofintdatatype,twonumbersoffloatdata typeasinputandoutputtheirsum:

1. Declare4variables:twooftypeintandtwooftypefloat.
2. Read 2 lines of input from stdin (according to the sequence given in the 'InputFormat'

sectionbelow)andinitializeyour4variables.

3. Usethe+and-operatortoperformthefollowingoperations:

- Printthesumanddifferenceoftwointvariableonanewline.
- Printthesumanddifferenceoftwofloatvariableroundedtoonedecimal placeonanewline.

InputFormat

Thefirstlinecontainstwointegers.Thesecondlinecontainstwofloating pointnumbers.

Constraints:1≤integervariables≤104,1≤floatvariables≤104

OutputFormat

Printthesumanddifferenceofbothintegersseparatedbyaspaceonthe firstline,andthesumanddifferenceofbothfloat(scaledto1decimal place)separatedbyaspaceonthesecondline.

SampleInput

104

4.02.0

SampleOutput

146

6.02.0

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main () {
    int a,b;
    float x,y;
    scanf ("%d %d",&a ,&b);
    scanf ("%f %f",&x,&y);
    printf ("%d %d\n",a+b , a-b);
    printf ("%.1f %.1f", x+y , x-y);
    return 0;
}
```

	Input	Expected	Got	
✓	10 4 4.0 2.0	14 6 6.0 2.0	14 6 6.0 2.0	✓
✓	20 8 8.0 4.0	28 12 12.0 4.0	28 12 12.0 4.0	✓

Passed all tests! ✓

ProblemStatement4:

Writeaprogramtoinputaname(asasinglecharacter)andmarksofthree testsasm1,m2,andm3ofastudentconsideringallthethreemarkshave beengiveninintegerformat.Now,youneedtocalculatetheaverageofthe givenmarksandprintitalongwiththenameasmentionedintheoutput formatsection.

Allthetestmarksareinintegersandhencecalculatetheaverageininteger aswell.Thatis,youneedtoprinttheintegerpartoftheaverageonlyand neglectthedecimalpart.

InputFormat:

Line1:Name(Singlecharacter)

Line2:Marksscoredinthe3testsseparatedbysinglespace.

OutputFormat:

Firstlineofoutputprintsthenameofthestudent.Secondlineoftheoutput printstheaveragemark.

Constraints

Marksforeachstudentlieintherange0to100(bothinclusive) SampleInput1:

A

346

SampleOutput1: A

4

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main () {
    char name;
    int m1,m2,m3;
    scanf (" %c",&name);
    scanf ("%d %d %d", &m1,&m2,&m3);
    int average=(m1+m2+m3)/3;
    printf ("%c\n", name);
    printf ("%d\n", average);
    return 0;
}
```

	Input	Expected	Got	
✓	A 3 4 6	A 4	A 4	✓
✓	T 7 3 8	T 6	T 6	✓
✓	R 0 100 99	R 66	R 66	✓

ProblemStatement5:

SomeCdatatypes,theirformatspecifiers,andtheirmostcommonbit widthsareasfollows:

- Int("%d"):32Bitinteger
- Long("%ld"):64bitinteger
- Char("%c"):Charactertype
- Float("%f"):32bitrealvalue
- Double("%lf"):64bitrealvalue

Reading

Toreadadatatype,usethefollowingsyntax:scanf("`format_specifier`", &val)Forexample,toreadacharacterfollowedbyadouble:charch;

doubled;scanf("%c%lf",&ch,&d);Forthemoment,wecanignorethe spacing between format specifiers.

Printing

To print a data type, use the following syntax: printf("`format_specifier`", val)Forexample,toprintacharacterfollowedbyadouble:charch='d';

doubled=234.432;

printf("%c%lf",ch,d);

Note:Youcanalsousecinandcoutinsteadofscanfandprintf;however,if youaretakingamillionnumbersasinputandprintingamillionlines,itis fastertousescanfandprintf.

InputFormat

Input consists of the following space-separated values: int, long, char, float, anddouble,respectively.

OutputFormat

Print each element on a new line in the same order it was received as input. Notethatthefloating-pointvalueshouldbecorrectupto3decimalplaces andthedoubleto9decimalplaces.

SampleInput 3

12345678912345

a

334.23

14049.30493

SampleOutput 3

12345678912345

a

334.230

14049.304930000

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main () {
    int int_value;
    long  long long_value;
    char char_value;
    float float_value;
    double double_value;
    scanf (" %d %lld %c %f %lf", &int_value, &long_value,&char_value,&float_value,&double_value);
    printf ("%d\n",int_value);
    printf("%lld\n",long_value);
    printf ("%c\n", char_value);
    printf ("%.3f\n",float_value);
    printf ("%.9lf",double_value);
    return 0;
}
```

	Input	Expected	Got	
✓	3 12345678912345 a 334.23 14049.30493	3 12345678912345 a 334.230 14049.304930000	3 12345678912345 a 334.230 14049.304930000	✓

Passed all tests! ✓

ProblemStatement6:

WriteaprogramtoprinttheASCIIvalueandthetwoadjacentcharacters ofthegivencharacter.

InputFormat:Readsthecharacter

OutputFormat:Firstlineprintstheasciivalue,secondlineprintsthe previouscharacterandnextcharacteroftheinputcharacter

SampleInput1: E

SampleOutput1:

69

DF

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main () {
    char ch;
    scanf (" %c",&ch);
    printf ("%d\n", ch);
    printf ("%c", ch-1);
    printf ( " %c",ch+1);
    return 0;
}
```

	Input	Expected	Got	
✓	E	69 D F	69 D F	✓

Passed all tests! ✓