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Report: hw2\_1

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Class: 乙班

Description: Using some previous knowledge and acquainting with the FOR LOOP. Maybe I need some more practice to make my code become neater.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Code:

#include<stdio.h>

#include<stdlib.h>

int main(int argc, char \*argv[])

{

double a;

a=atof(argv[1]);

int time;

time=atoi(argv[2]);

double b=0.5\*(1+a);

printf("%.10f\n", b);

int i;

for(i=1;i<time;i++)

{

b=0.5\*(b+a/b);

printf("%.10f\n", b);

}

return 0;

}

Compilation:

gcc -o hw2\_1 hw2\_1.c

Execution:

./hw2\_1 101 5

Output:

51.0000000000

26.4901960784

15.1514636943

10.9087431666

10.0836858158

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Report: hw2\_2

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Description: I Need to think logically and use double FOR LOOP. Since e=(1+1/n)^n, I think that I can declare a variable f and make it times e. After printing e, make e be 1 again so that it can be used in the FOR LOOP next time.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Code:

#include <stdio.h>

#include <stdlib.h>

int main(int argc , char \*argv[])

{

int time, i, k;

time = atoi(argv[1]);

double e = 1, f;

for(i=1;i<=time;i++)

{

f = (1.0f / (double)i) + 1;

for(k=1;k<=i;k++){

e \*= f;

}

printf("%.10f\n", e);

e = 1;

}

return 0;

}

Compilation:

gcc -o hw2\_2 hw2\_2.c

Execution:

./hw2\_2 6

Output:

2.0000000000

2.2500000000

2.3703703704

2.4414062500

2.4883200000

2.5216263717

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Report: hw2\_3

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Description: I solved the third problem before the second one. The most important thing to notice is the type of “tmp”. Since e is a double, I should use “1.0f” instead of “1”; also, I should transform “tmp” into a double.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Code:

#include <stdio.h>

#include <stdlib.h>

int main(int argc, char\*argv[])

{

double time;

time=atof(argv[1]);

double e=1.0;

int i, tmp=1;

for(i=1; i<=time; i++)

{

tmp=tmp\*i;

e=e+(1.0f/(double)tmp);

printf("%.10f\n", e);

}

return 0;

}

Compilation:

gcc -o hw2\_3 hw2\_3.c

Execution:

./hw2\_3 5

Output:

2.0000000000

2.5000000000

2.6666666667

2.7083333333

2.7166666667