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Report: HW1\_1

Author: F74055047 張財實 <changchaishi@gmail.com>

Class: 乙班

Description:

From this homework 1 we can see if integer divided by integer will only show the first digit of value, therefore using the float number will give us more accurate value.

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

#include<stdio.h>

int main()

{

int r=10, v; //initialization of r

v = (4.0f/3.0f) \* 3.14 \* r \* r \* r; //calculation

printf("Volume : %d\n", v); //output volume

return 0;

}

Compilation:

gcc -o hw1\_1 hw1\_1.c

Execution:

./hw1\_1

Output:

Volume : 4186

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Report: HW1\_2

Author: F74055047 張財實 <changchaishi@gmail.com>

Class: 乙班

Description:

C programming language does not have exponent character, so we have to use \* every single time when we face multiplication.

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

##include<stdio.h>

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

{

int x,y; //let y be the value of expression

x = atoi(argv[1]); //string to integer

y = 3\*x\*x\*x\*x\*x+2\*x\*x\*x\*x-5\*x\*x\*x-x\*x+7\*x-6; //calculation

printf("Value is %d\n", y ); //output

return 0;

}

Compilation:

gcc -o hw1\_2 hw1\_2.c

Execution:

./hw1\_2 10

Output:

Value is 314964

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Report: HW1\_3

Author: F74055047 張財實 <changchaishi@gmail.com>

Class: 乙班

Description:

Using parentheses to solve a math equation is tricky, in c programming, we still have to use \* as multiple operand between “)” and variable.

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

#include<stdio.h>

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

{

int x,y;

x = atoi(argv[1]); //string to integer

y =((((3\*x+2)\*x-5)\*x-1)\*x+7)\*x-6 ; //calculation

printf("Value is %d\n", y ); //output

return 0;

}

Compilation:

gcc -o hw1\_3 hw1\_3.c

Execution:

./hw1\_3 10

Output:

Value is 314964

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Report: HW1\_4

Author: F74055047 張財實 <changchaishi@gmail.com>

Class: 乙班

Description:

From hw1\_2 to hw1\_4, we have learnt how to use command line argument as our input string and make sure the string argument is converted to an integer. I used the simplest calculation to show the output.

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

#include<stdio.h>

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

{

int ip, op1, op2, op3 , op4, rmd1, rmd2; //ip is input number,op is ouput number,rmd is remainder number

ip = atoi(argv[1]); //string to integer

op1 = ip / 20;

rmd1 = ip - op1 \* 20;

op2 = rmd1 / 10;

rmd2 = rmd1 - op2 \* 10;

op3 = rmd2 / 5;

op4 = rmd2 - op3 \* 5; //op4 is last remainder

//and its number directly represents $1 bill.

printf("$20 bills:%d\n",op1); //output

printf("$10 bills:%d\n",op2);

printf("$5 bills:%d\n",op3);

printf("$1 bills:%d\n",op4);

return 0;

}

Compilation:

gcc -o hw1\_4 hw1\_4.c

Execution:

./hw1\_4 93

Output:

$20 bills:4

$10 bills:1

$5 bills:0

$1 bills:3