計算機程式語言

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Chapter 2_project 3

Modify the program of Programming Project 2 so that it prompts the user to enter the radius of the sphere.

Project2:

Write a program that computes the volume of a sphere with a 10-meter radius, using the formula $v=4/3*PI*r^3$.Write the fraction 4/3 as 4.0f/3.0f.

```c
C++ project > C Chap2_3.c
1    #include <stdio.h>
2
3    int main(void) {
4
5        int r = 0;
6
7        printf("Enter radius: ");
8        scanf("%d",      );
9
10       printf("\nSphere volume: %.2f cubic meters\n",                              );
11       return 0;
12   }
```

Chapter 2_project 4

Write a program that asks the user to enter a dollars-and-cents amount, than displays the amount with 5% tax added:

```
Enter an amount: 100.00
With tax added: $105.00
```

```c
C++project > C Chap2_4.c
1    #include <stdio.h>
2
3    int main(void) {
4
5        float money = 0.0f;
6        printf("Enter an amount: ");
7
8        printf("With tax added: $%.2f\n", money * 1.05f);
9
10       return 0;
11   }
```

Chapter 2_project 5

Write a program that asks the user to enter a value for x and then displays the value of the following polynomial:

$$3x^5+2x^4-5x^3-x^2+7x-6$$

Hint: C doesn't have an exponentiation operator, so you'll need to multiply x by itself repeatedly in order to compute the powers of or. (For example, x * x * x is x cubed.)

```c
int main(void) {

    int x = 0;

    printf("Enter value for x: ");
    scanf("%d", &x);
    printf("Result: %d\n,                              );

    return 0;
}
```

Chapter 2_project 7

Write a program that asks the user to enter a U.S. dollar amount and then shows how to pay

that amount using the smallest number of $20, $10, $5, and $1 bills:

Enter a dollar amount: 93

$20   bills: 4

$10   bills: 1

$5   bills: 0

$1   bills: 3

```c
#include <stdio.h>

int main(void) {

    int money = 0;

    printf("Enter a dollar amount: ");
    scanf("%d", &money);

    printf("$20 bills: %d\n", money/20);
    [                    ]

    printf("$10 bills: %d\n", money/10);
    money -= 10 * (money/10);

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

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

    return 0;
}
```