Language Programming: Homework #1

Assigned on 09/17/2019, Due on 9/24/2019

Description:

1. (20%) Write a program that computes the volume of a sphere with a r-meter radius, using the formula \( v = \frac{4}{3} \pi r^3 \). This program need the user enter the radius ‘r’ of the sphere by yourself. (Write the fraction 4/3 as 4.0f/3.0f)

2. (30%) 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 power of x. (For example, X*X*X is X cubed.)

3. (40%) Modify the program of Programming Question 2 so that the polynomial is evaluated using the following formula:

\[ (((3x+2)x-5)x-1)x+7)x-6 \]

Note that the modified program performs fewer multiplications. This technique for evaluating polynomials is known as Horner’s Rule
4. (10%) Report.

5. (Bonus 10%) Update your report on your server.

**Command Line:**

```
./hw1 num1 (You must use Parameter argc and argv)
```

(注意有空白鍵隔開)

**Output:**

A result value. (get the second digit after the point)

**Example**

```bash
> ./hw1_1 2
> 33.49
```

**Bonus**

請各位從這次開始，除了要交紙本，也要將report 以電子檔的形式上傳至server

電子檔檔名格式：F74028888_王大明_HW0.docx

以下為教學，若仍有許多不懂的地方，下次上課後助教再實際操作一次

1. 安裝FileZilla

2. 連線方式：打開FileZilla 後>檔案>站台管理員
3. 如圖設定好連線方式後連線

4. 這邊直接確認就好
5. 進到對應的目錄並上傳你的電子檔，一份作業一個電子檔