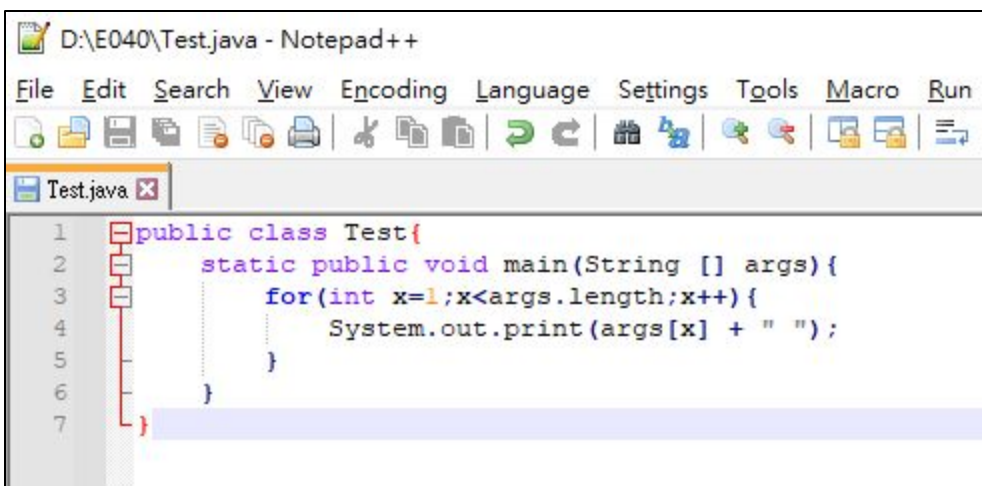


程式設計

2021 03 04

參考資料：

https://github.com/MyDearGreatTeacher/2021_1_courses/blob/main/%E7%A8%B%E5%BC%8F%E8%A8%AD%E8%A8%882/%E4%B8%A%E8%AA%B2%E5%85%A7%E5%AE%B9/20210304.md



D:\E040\Test.java - Notepad++

File Edit Search View Encoding Language Settings Tools Macro Run

Test.java

```
1 public class Test{
2     static public void main(String [] args){
3         for(int x=1;x<args.length;x++){
4             System.out.print(args[x] + " ");
5         }
6     }
7 }
```

在命令列執行「java Test a b c」和「java Test 1 2 3 4」兩個指令，結果為何？

- ☐ 沒有輸出、輸出1 2 3
- ☒ 輸出b c、輸出2 3 4
- ☐ 沒有輸出、輸出1 2 3 4
- ☐ 執行時拋出一個錯誤、輸出1 2 3
- ☐ 執行時拋出一個錯誤、輸出2 3 4
- ☐ 執行時拋出一個錯誤、輸出1 2 3 4

C:\Users\PC>D:

D:\>cd E040

D:\E040>javac Test.java

D:\E040>java Test a b c

b c

D:\E040>java Test 1 2 3 4

2 3 4

D:\E040>java Test 1 2 3 4 5 6 7 8 9

2 3 4 5 6 7 8 9

D:\E040>java Test 1 1 1 a a a

1 1 a a a

D:\E040>java Test 5 1 1 1 a a a

1 1 1 a a a

D:\E040\Hi.java - Notepad++

File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

Test.java x Hi.java x

```
1  /*
2   * 我的第一個Java程式
3   */
4   //package ex01;           //指定package 為ex01
5
6   import java.util.Scanner;    //import Scanner類別套件
7
8   /** 這是主類別 Hi */
9   public class Hi {
10      /**這是程式進入點 main 方法*/
11      public static void main(String[] args) {
12         Scanner scn = new Scanner(System.in);    /*建立 Scanner 物件 scn*/
13         System.out.print("請輸入姓名：");
14         String strName = scn.next();    //字串變數strName儲存scn接受的字串
15         System.out.println("Hi! "+strName + ", 歡迎來到Java世界!");
16         scn.close();    //關閉scn物件
17      }
18
19 }
```

C:\Users\PC>D:

D:\>cd E040

D:\E040>javac Hi.java

D:\E040>java Hi.java
請輸入姓名：達叔
Hi! 達叔，歡迎來到Java世界！

C Program To Find Area And Circumference Of Circle

```
D:\E040\c.c - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
[Icons]
(global)
c.c
1  #include<stdio.h>
2  #include<math.h>
3  int main()
4  {
5      /*Program By Ghanendra Yadav
6       Visit http://www.programmingwithbasics.com/
7       */
8      int rad;
9      float PI = 3.14159265359, area, ci, vo, su;
10
11     printf("\nEnter radius of circle (輸入圓的半徑) : ");
12     scanf("%d", &rad);
13
14     area = PI * rad * rad;
15     printf("\nArea of circle (圓的面積) : %f ", area);
16
17     ci = 2 * PI * rad;
18     printf("\nCircumference (圓的周長) : %f ", ci);
19
20     vo = 4 * PI * rad * rad * rad / 3;
21     printf("\nVolume (球的體積) : %f ", vo);
22
23     su = 4 * PI * rad * rad;
24     printf("\nSurface Area (球的表面積) : %f ", su);
25
26     return (0);
27 }
```

```
D:\E040\c.exe
Enter radius of circle (輸入圓的半徑) : 14
Area of circle (圓的面積) : 615.752197
Circumference (圓的周長) : 87.964600
Volume (球的體積) : 11494.041992
Surface Area (球的表面積) : 2463.008789
-----
Process exited after 0.776 seconds with return value 0
請按任意鍵繼續 . . .
```

Radius (r)

14

Volume

11494.04032193

Surface area

2463.008640414

D:\E040\c.c - Dev-C++ 5.11

File Edit Search View Project Execute Tools AStyle Window Help



(globals)

[*] c.c

```
1  #include<stdio.h>
2  #include<math.h>
3  int main()
4  {
5      /*Program By Ghanendra Yadav
6      Visit http://www.programmingwithbasics.com/
7      */
8      int rad;
9      float PI = 3.14159265359, area, ci, vo, su;
10
11     printf("\nEnter radius of circle (輸入圓的半徑) : ");
12     scanf("%d", &rad);
13
14     area = PI * pow (rad,2);
15     printf("\nArea of circle (圓的面積) : %f ", area);
16
17     ci = 2 * PI * rad;
18     printf("\nCircumference (圓的周長) : %f ", ci);
19
20     vo = 4* PI * pow (rad,3)/3;
21     printf("\nVolume (球的體積) : %f ", vo);
22
23     su = 4 * PI * pow (rad,2);
24     printf("\nSurface Area (球的表面積) : %f ", su);
25
26     return (0);
27 }
```

```
Dev D:\E040\c++.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
[Icons] (globals)
c++.cpp
1  #include<iostream>
2  using namespace std;
3  int main()
4  {
5      /*Program By Ghanendra Yadav
6       Visit http://www.programmingwithbasics.com/
7       */
8      int rad;
9      float PI = 3.14159265359, area, ci, vo, su;
10
11     cout<<"Enter radius of circle (輸入圓的半徑) : ";
12     cin>>rad;
13
14     area = PI * rad * rad;
15     cout<<"Area of circle (圓的面積) : "<< area<<endl;
16
17     ci = 2 * PI * rad;
18     cout<<"Circumference (圓的周長) : "<< ci<<endl;
19
20     vo = 4* PI * rad * rad * rad/3;
21     cout<<"Volume (球的體積) : "<< vo<<endl;
22
23     su = 4 * PI * rad * rad;
24     cout<<"Surface Area (球的表面積) : "<< su<<endl;
25
26     return (0);
27 }
```

```
D:\E040\c++.exe
Enter radius of circle (輸入圓的半徑) : 22
Area of circle (圓的面積) : 1520.53
Circumference (圓的周長) : 138.23
Volume (球的體積) : 44602.2
Surface Area (球的表面積) : 6082.12

-----
Process exited after 2.508 seconds with return value 0
請按任意鍵繼續 . . .
```

Radius (r)

22

Volume


44602.23810057

Surface area

6082.123377350

D:\E040\c++.cpp - Dev-C++ 5.11

File Edit Search View Project Execute Tools AStyle Window Help



(globals) ▾

c++.cpp

```
1  #include<iostream>
2  #include<math.h>
3  using namespace std;
4  int main()
5  {
6      /*Program By Ghanendra Yadav
7      Visit http://www.programmingwithbasics.com/
8      */
9      int rad;
10     float PI = 3.14159265359, area, ci, vo, su;
11
12     cout<<"Enter radius of circle (輸入圓的半徑) : ";
13     cin>>rad;
14
15     area = PI * pow (rad,2);
16     cout<<"Area of circle (圓的面積) : "<< area<<endl;
17
18     ci = 2 * PI * rad;
19     cout<<"Circumference (圓的周長) : "<< ci<<endl;
20
21     vo = 4* PI * pow (rad,3)/3;
22     cout<<"Volume (球的體積) : "<< vo<<endl;
23
24     su = 4 * PI * pow(rad,2);
25     cout<<"Surface Area (球的表面積) : "<< su<<endl;
26
27     return (0);
28 }
```

```
*D:\E040\java.java - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
java.java x
1  /* Program By Ghanendra Yadav
2  Visit http://www.programmingwithbasics.com/
3  */
4  import java.util.Scanner;
5  class circle
6  {
7      static Scanner sc = new Scanner(System.in);
8      public static void main(String args[])
9      {
10         System.out.print("Enter The Radius of Circle (輸入圓的半徑) : ");
11         double radius = sc.nextDouble();
12
13         double area = Math.PI * radius *radius;
14         System.out.println("Circle Area is (圓的面積) : "+ area);
15
16         double circumference = 2 * Math.PI *radius;
17         System.out.println( "Circle circumference is (圓的周長) : "+ circumference);
18
19         double volume = 4 * Math.PI * radius * radius *radius/3;
20         System.out.println("Circle volume is (球的體積) : "+ volume);
21
22         double SurfaceArea = 4 * Math.PI * radius *radius;
23         System.out.println("Circle Surface Area is (球的表面積) : "+ SurfaceArea);
24     }
25 }
```

```
D:\E040>java java.java
Enter The Radius of Circle : 18
Circle Area is : 1017.8760197630929
Circle circumference is : 113.09733552923255
Circle volume is : 24429.02447431423
Circle Surface Area is : 4071.5040790523717
```

Radius (r)

18

Volume

24429.02447431

Surface area

4071.504079052

D:\E040\java.java - Notepad++

File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?



java.java

```
1  /* Program By Ghanendra Yadav
2     Visit http://www.programmingwithbasics.com/
3  */
4  import java.util.Scanner;
5  class circle
6  {
7      static Scanner sc = new Scanner(System.in);
8      public static void main(String args[])
9      {
10         System.out.print("Enter The Radius of Circle (輸入圓的半徑) : ");
11         double radius = sc.nextDouble();
12
13         double area = Math.PI * Math.pow (radius,2);
14         System.out.println("Circle Area is (圓的面積) : "+ area);
15
16         double circumference = 2 * Math.PI *radius;
17         System.out.println("Circle circumference is (圓的周長) : "+ circumference);
18
19         double volume = 4 * Math.PI * Math.pow (radius,3)/3;
20         System.out.println("Circle volume is (球的體積) : "+ volume);
21
22         double SurfaceArea = 4 * Math.PI * Math.pow (radius,2);
23         System.out.println("Circle Surface Area is (球的表面積) : "+ SurfaceArea);
24     }
25 }
```



```
//package ex02;  
public class Ex02_03 {  
    public static void main(String[] args) {  
        final double basicRate = 1.2;  
        basicRate = 1.6;  
        System.out.println("一年期定存利率為 " + (basicRate + 0.1));  
        System.out.println("兩年期定存利率為 " + (basicRate + 0.2));  
    }  
}
```

D:\E040\Ex02_03.java - Notepad++

File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

Ex02_03.java

```
1 //package ex02;
2 public class Ex02_03 {
3     public static void main(String[] args) {
4         double basicRate = 1.2;
5         System.out.println("基準匯率為" + basicRate + "時");
6         System.out.println("一年期定存利率為 " + (basicRate + 0.1));
7         System.out.println("兩年期定存利率為 " + (basicRate + 0.2)+"\n");
8
9         basicRate = 1.6;
10        System.out.println("基準匯率為" + basicRate + "時");
11        System.out.println("一年期定存利率為 " + (basicRate + 0.1));
12        System.out.println("兩年期定存利率為 " + (basicRate + 0.2));
13
14    }
15 }
```

```
D:\E040>java Ex02_03.java
基準匯率為1.2時
一年期定存利率為 1.3
兩年期定存利率為 1.4

基準匯率為1.6時
一年期定存利率為 1.7000000000000002
兩年期定存利率為 1.8
```

```
import _____._____._____;

public class Ex02_04 {
    public static void main(String[] _____) {
        _____ scn = new Scanner(_____);
        System.out.print("請輸入資料:");
        var inputData = scn._____( );
        System.out.println("您輸入的資料是 " + inputData);
        scn.close();
    }
}
```

D:\E040\Java SE12基礎必修課_範例檔與電子書\範例\ex02\src\ex02\Ex02_04.java - Notepad++

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Ex02_04.java

```
1 package ex02;
2 import java.util.Scanner;
3 public class Ex02_04 {
4     public static void main(String[] args) {
5         Scanner scn = new Scanner(System.in);
6         System.out.print("請輸入資料：");
7         var inputData = scn.next();
8         System.out.println("您輸入的資料是 " + inputData);
9         scn.close();
10    }
11 }
12
```

```
D:\E040>java Ex02_04.java
請輸入資料：E040
您輸入的資料是 E040
```

util是utility的縮寫,意為多用途的,工具性質的包。

這個包中主要存放了:集合類(如ArrayList,HashMap等),隨機數產生類,屬性檔案讀取類,定時器類等類。