**Java學習歷程\_6**

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| * 主題:輸入身高體重計算BMI 日期: 2023/4/13   目標: 輸入**身高體重計算BMI**；  且不同作用每行（import, class, main, System.out.）都要加註解。 |
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| 思維歷程: (如何解決問題)  **輸入身高 ，存入變數**  **輸入體重 ，存入變數**  **計算**BMI**，存入變數**  **輸出計算結果** |
| 根源碼: (檔名bmi.java)  版本1:  import java.util.\*;  import java.util.Scanner;  public class bmi{  public static void main (String args[]){  double bmi, w1, h1, s1, x1;//x1 is the ideal height to gain or lose  Scanner input=new Scanner(System.in);  System.out.println("Input your height(centimeter): ");  h1=input.nextDouble();  while(h1<=0){  h1=input.nextDouble();  System.out.println("Height must be greater than 0!");  System.out.println("Please input again.");  }//while  System.out.println("Input your weight(kilogram): ");  w1=input.nextDouble();  while(w1<=0){  w1=input.nextDouble();  System.out.println("Weight must be greater than 0!");  System.out.println("Please input again.");  }//while  s1=(h1/100)\*(h1/100);  bmi=w1/s1;  System.out.println("Your height is: "+h1+" centimeter.");  System.out.println("Your weight is: "+w1+" kilogram.");  System.out.println("Your BMI: "+bmi);  }//main()  }//class  版本2:  import java.util.\*;  import java.util.Scanner;  public class bmi{  public static void main (String args[]){  double bmi, w1, h1, s1, x1;//x1 is the ideal height to gain or lose  Scanner input=new Scanner(System.in);  System.out.println("Input your height(centimeter): ");  h1=input.nextDouble();  while(h1<=0){  h1=input.nextDouble();  System.out.println("Height must be greater than 0!");  System.out.println("Please input again.");  }//while  System.out.println("Input your weight(kilogram): ");  w1=input.nextDouble();  while(w1<=0){  w1=input.nextDouble();  System.out.println("Weight must be greater than 0!");  System.out.println("Please input again.");  }//while  s1=(h1/100)\*(h1/100);  bmi=w1/s1;  String status;  if (bmi<18.5)  status="Underweight.";  else if (bmi>=18.5&&bmi<24)  status="Normal.";  else if (bmi>=24&&bmi<27)  status="Overweight.";  else  status="Obese.";  String improvement;  System.out.println("Your height is: "+h1+" centimeter.");  System.out.println("Your weight is: "+w1+" kilogram.");  System.out.println("Your BMI: "+bmi);  System.out.println("Your body type: "+status);  }//main()  }//class  版本n: (優化)  import java.util.\*;  import java.util.Scanner;  public class bmi{  public static void main (String args[]){  double bmi, w1, h1, s1, x1;//x1 is the ideal height to gain or lose  Scanner input=new Scanner(System.in);  System.out.println("Input your height(centimeter): ");  h1=input.nextDouble();  while(h1<=0){  h1=input.nextDouble();  System.out.println("Height must be greater than 0!");  System.out.println("Please input again.");  }//while  System.out.println("Input your weight(kilogram): ");  w1=input.nextDouble();  while(w1<=0){  w1=input.nextDouble();  System.out.println("Weight must be greater than 0!");  System.out.println("Please input again.");  }//while  s1=(h1/100)\*(h1/100);  bmi=w1/s1;  String status;  if (bmi<18.5)  status="Underweight.";  else if (bmi>=18.5&&bmi<24)  status="Normal.";  else if (bmi>=24&&bmi<27)  status="Overweight.";  else  status="Obese.";  String improvement;  if (bmi<18.5){  x1=(s1\*18.5)-w1;  improvement="You need to gain at least "+x1+" kilogram in order to be healthy.";  }  else if (bmi>24){  x1=w1-(s1\*18.5);  improvement="You need to lose at least "+x1+" kilogram in order to be healthy.";  }  else  improvement="Remain your healthy weight.";  System.out.println("Your height is: "+h1+" centimeter.");  System.out.println("Your weight is: "+w1+" kilogram.");  System.out.println("Your BMI: "+bmi);  System.out.println("Your body type: "+status);  System.out.println(improvement);  }//main()  }//class |
| 執行結果: (畫面截圖) |
| 心得與反思: (寫程式時遇到何問題?bug?如何解決?學到?感受?)   * 可以把source code with bugs貼出來. Debug **歷程**貼出來 * (寫程式時遇到何問題?如何解決???)   source code with bugs: 1  Scanner inp=newScanner(System.in);  ^  symbol: method newScanner(InputStream)  location: class bmi  bmi.java:8: error: cannot find symbol  source code with bugs: 2  bmi.java:26: error: 'else' without 'if'   * 學到   How to use while and loop when coding.   * 感受   It was incredible to have successfully done my very own BMI calculator.  ( 4)寫完第6程式習題，熟悉while結構?  5.非常熟悉 4.熟悉 3.普通 2.不熟悉 1.非常不熟悉  ( 4 )寫完第6程式習題，熟悉for結構?  5.非常熟悉 4.熟悉 3.普通 2.不熟悉 1.非常不熟悉  ( 4 )寫完第6程式習題，熟悉while、for 條件概念?  5.非常熟悉 4.熟悉 3.普通 2.不熟悉 1.非常不熟悉  ( 3 )寫完第6程式習題，熟悉loop 之流程圖概念?  5.非常熟悉 4.熟悉 3.普通 2.不熟悉 1.非常不熟悉  ( 5 )寫完第6程式習題，熟悉運算式（如a\*b-c）?  5.非常熟悉 4.熟悉 3.普通 2.不熟悉 1.非常不熟悉  ( 4 )寫完第6程式習題，熟悉多重if/else ?  5.非常熟悉 4.熟悉 3.普通 2.不熟悉 1.非常不熟悉 |