



รายงาน

วิชา การเขียนโปรแกรมภาษาจาวา



31.
OK
WV

จัดทำโดย

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កំណើង

ក្រសួងពេទ្យ

សំវារណ៍

ទេស

និង

ក្នុង

n

សរុប

v

ការពិន័យ

1

10 និមិត្តការណែនាំ និង ការសម្រាប់បង្កើត

2-9

class Diagram

10-14

នាមីលី, ការសម្រាប់ការបង្កើតនិងការអនុវត្ត string no=char

15-17

Substring + - * % max min avg tot ននដែល

18-21

នគរបាលការបង្កើត

22

SUBJECT:

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1. "มีนิยม 60 คำ"

Reserved Word (49)

throws, throw, native, default, volatile, float, const, short, transient,
class, import, assert, return, interface, abstract, super, string,
extends, finally, double, final, break, new, continue, public, static,
synchronized, catch, implements, protected, boolean, while, for, strictfp,
switch, private, instanceof, package, void, try, this, if, goto, else, char,
do, case, byte, long, int, server, Browser, File, Folder, keyword, null,
Login, Bit, upload, software

សំណង់លទ្ធផលអនុញ្ញាត 4 ច.ស.

២. ដើម្បីស្វែងរករាយ 10 ពីរក្រុង នៅក្នុងការអនុញ្ញាត 5 នេះ

វគ្គការងារទី 1 : បញ្ជាក់

public class Warn

```
public static void main(String w) {
    int w1 = Integer.parseInt(w[0]);
    int w2 = Integer.parseInt(w[1]);
    int w3 = Integer.parseInt(w[2]);
    int w4 = Integer.parseInt(w[3]);
    int w5 = Integer.parseInt(w[4]);
    System.out.println ("plus=" +(w1+w2+w3));
    System.out.println ("minus=" +((w1-w2)-w3));
}
```

វគ្គការងារទី 2 : បញ្ជាក់

public X {

```
public static void main (String args[]) {
    int a1 = Integer.parseInt(args[0]);
    int a2 = Integer.parseInt(args[1]);
    int a3 = Integer.parseInt(args[2]);
    int a4 = Integer.parseInt(args[3]);
    int a5 = Integer.parseInt(args[4]);
    System.out.println ("multi=" +(a1 * a2 * a3));
    System.out.println ("div=" +(a1 / a2) / a3);
}
```

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Assignment 3 : for

```

class J0204 {
    public static void main(String arg[]) {
        System.out.println("ASCII character ::");
        for (int i=0; i<256; a++) {
            System.out.print((char)i + " ");
        }
        string s = "thaiall";
        System.out.println(s+s.length());
    }
}

```

Assignment 4 : while (window)

```

class J0205 {
    public static void main(String args[]) {
        system.out.println("print 1 to 10 ::");
        int i;
        i = -5;
        while (i <= 5) {
            try {
                i++;
                System.out.println((double)5/i);
                System.out.println(5/i);
            }
            catch(ArithmeticException e) {
                System.out.println("may divide by zero");
            }
        }
    }
}

```

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```

int k=0;
i=0;
while(i<5) {
    System.out.print(+k)
    k=k+(i++);
    System.out.print(k--);
}

```

Falsilng 5 : primitive

```

class 00102 {
    public static void main(String args[]) {
        float d;
        d = 340000000000000f;
        System.out.println(float = +d);
        double e;
        e = 1790000000000000d;
        System.out.println("double =" + e);
        String z = "ThaiAll";
        System.out.println("String =" + z);
        System.out.println(z.substring(0, 4));
        System.out.println(z.substring(2, 5));
        char ar[] = new char[128];
        ar = z.toCharArray();
        System.out.println((char) ar[0]);
        System.out.println(ar[10]);
    }
}

```

ပါယ်နည် 6 : array ၂ မျိုး

```

class static void main(String args[]){
    String a[][] = new String[2];
    a[0][0] = "101";
    a[0][1] = "102";
    int i=0;
    aa[1][i++] = "tom";
    for( i=0; i<a[0].length; i++ ){
        System.out.println("element of 0, "+i+" = "+a[0][i]);
    }
}
}

```

ပါယ်နည် 7 : substring

```

class x7 {
    static void main (String args[]){
        string z = "kronnarin";
        System.out.println(z.substring (0,2));
        System.out.println(a.substring (2,6));
        System.out.println(z.Substring(7,9));
        System.out.println(z.substring(1,8));
        System.out.println(z.substring(5));
    }
}

```

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Tulisanan 8 : toUpperCase

```

class X8
public static void main(String args[]){
    name = "kronwarin";
    String Uname = "Puttharong";
    String nickname = Namwarr;
    name.name.toUpperCase();
    Uname.Uname.toUpperCase();
    nickname.nickname.toUpperCase();
    System.out.println(name + Uname + " " + nickname);
}
}

```

Tulisanan 9 : toLowerCase

```

class X9 {
public static (String args[]){
    ntring name = "kronwarin";
    String Uname = "Puttharong";
    name.name.toLowerCase();
    Uname.Uname.toLowerCase();
    System.out.println(name + Uname + nickname);
}
}

```

Program 10 : Integer.parseInt

```
import java.io.*;
class J0305 {
    public static void main (String args[]) throws IOException {
        BufferedReader stdin = new BufferedReader (new InputStreamReader
            (System.in));
        String buf
        int i;
        System.out.println ("Get until receive 0");
        do {
            buf = stdin.readLine();
            i = Integer.parseInt (buf);
            System.out.println ("output is " + i);
        } while (i != 0);
    }
}
```

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ເພື່ອມ

(ໂປຣແກຣມທີ່ເຂົ້ານະຄຸກ)

ໂປຣແກຣມທີ່ 1

ບຽນກັດທີ່ 1 ສົ່ວໂລ່ງ {
 ບຽນກັດທີ່ 2 ຕົວໃໝ່ [] ນັກງານ
 ບຽນກັດທີ່ 3 ສົ່ວໂລ່ງ;
 ບຽນກັດທີ່ 4 ສົ່ວໂລ່ງ :- ການຕົວແທກ int
 ບຽນກັດທີ່ 5 ອູ້ນຳ. ຮະຫວາງ 3 ຕົວ tem

ໂປຣແກຣມທີ່ 2

ບຽນກັດທີ່ 1 ສົ່ວໂລ່ງ class
 ບຽນກັດທີ່ 2 ສົ່ວໂລ່ງ main
 ບຽນກັດທີ່ 3 ຕົວເປົ້າຂອງພົນ args
 ບຽນກັດທີ່ 4 ຕົວເປົ້າຢູ່ -
 ບຽນກັດທີ່ 5 ສົ່ວໂລ່ງ out

ໂປຣແກຣມທີ່ 3

ບຽນກັດທີ່ 6 ຕົວເປົ້າເປົ້າຂອງ void
 ບຽນກັດທີ່ 7 a++
 ບຽນກັດທີ່ 8 ລົງໃກ້ C
 ບຽນກັດທີ່ 9 string: s ດິຈິນກີ່ນິ້ນ
 ບຽນກັດທີ່ 10 ແລ້ວຂະ g ເປົ້າ d

ໂປຣແກຣມທີ່ 4

ໂປຣແກຣມທີ່ 11 ສົ່ວໂລ່ງ ;
 ບຽນກັດທີ່ 12 ສົ່ວໂລ່ງ) ຂອງລົບປົກ
 ບຽນກັດທີ່ 13 ຕົວເປົ້າຂອງເປົ້າ System
 ບຽນກັດທີ່ 14 ມົວງເລົ່າບໍ່ໄດ້ຍັງ
 ບຽນກັດທີ່ 15 ສົ່ວໂລ່ງ ;

ໂປຣແກຣມທີ່ 5

ບຽນກັດທີ່ 16 ສົ່ວໂລ່ງ void main
 ບຽນກັດທີ່ 17 ເປົ້າຂອງ t ເປົ້າ s(string)
 ບຽນກັດທີ່ 18 ສົ່ວໂລ່ງ ;
 ບຽນກັດທີ່ 19 ຕົວເປົ້າໄລ່ຍັນ i ທີ່ນີ້ e
 ບຽນກັດທີ່ 20 ສົ່ວໂລ່ງ ()

ໂປຣແກຣມທີ່ 6

ບຽນກັດທີ່ 21 reader / t ຕົວກອຕົວກ່ອນຕົວໃຫຍ່
 ບຽນກັດທີ່ 22 ສົ່ວໂລ່ງ ;
 ບຽນກັດທີ່ 23 ສົ່ວໂລ່ງ ()
 ບຽນກັດທີ່ 24 ຕັ້ງ + ຕົວກິ່ນຕົວ = 1
 ບຽນກັດທີ່ 25 ສົ່ວໂລ່ງ }

ໂປຣແກຣມທີ່ 7

ບຽນກັດທີ່ 26 ສົ່ວໂລ່ງ public
 ບຽນກັດທີ່ 27 ຕົວເປົ້າ S ດິຈິນກີ່ນິ້ນ
 ບຽນກັດທີ່ 28 ເປົ້າຂອງ a ເປົ້າ z
 ບຽນກັດທີ່ 29 Substring ດິຈິນກີ່ນິ້ນ
 ບຽນກັດທີ່ 30 Substring ອື່ນໜີ້ |

ໂປຣແກຣມທີ່ 8

ບຽນກັດທີ່ 31 ສົ່ວໂລ່ງ {
 ບຽນກັດທີ່ 32 ສົ່ວໂລ່ງ String
 ບຽນກັດທີ່ 33 ສົ່ວໂລ່ງ ""
 ບຽນກັດທີ່ 34 Upper / U ຕົວເປົ້າຂອງຕົວໃຫຍ່
 ບຽນກັດທີ່ 35 nickname ສົ່ວໂລ່ງ e

លេខរាងទី 9

បរពត៌ទី 2 សំវិជ្ជ់ void main

បរពត៌ទី 3 អនុញ្ញាតនូវ S(String)

បរពត៌ទី 4 សំវិជ្ជ់ ;

បរពត៌ទី 6 ចងកម្មុទ្ទិ i ឬ n e

បរពត៌ទី 8 សំវិជ្ជ់ ()

លេខរាងទី 10

បរពត៌ទី 4 reader / រដ្ឋសារការពារក្នុងការឱ្យ

បរពត៌ទី 6 សំវិជ្ជ់ ;

បរពត៌ទី 10 សំវិជ្ជ់ ()

បរពត៌ទី 13 នូវ + ចែងក្នុងនៃ |

បរពត៌ទី 15 សំវិជ្ជ់ }

UML STRUCTUREThings

① Structural things

1.1. Logical things

- class

- Collaboration

- Use case

- Active class

1.2. Physical things

- component

- Node

② Behavioral things

2.1. Interaction

2.2. State machine

③ Grouping things

3.1. Package

④ Annotational things

4.1. Note (Attached note)

Relationships

① Meaning

1.1. Dependency

1.2. Realization

② Structural

2.1. Association

- Aggregation

③ Generalized / Specialized

3.1. Generalization

- Specialization

④ State

Diagrams

① Use case

② static Structure

2.1. Class

2.2. Object

③ Interaction

3.1. Sequence

3.2. Collaboration

④ State

⑤ Activity

⑥ Implementation

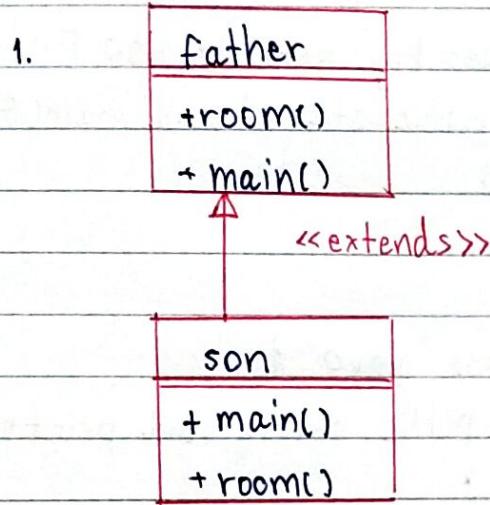
6.1. Component

6.2. Deployment

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13. ອາວີ່ຍນ class Diagram ອະນຸຍາກູມ 10 Diagram ໄລວີເຂົ້ານໂປຣກຣມ
ອາວີ່ຍນ Diagram ກັບ 10 ນຶ່ງ



```

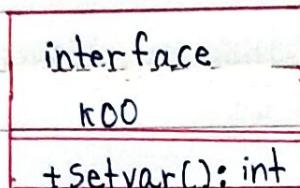
class father {
    void room() {
        System.out.println("room in father");
    }
    public static void main(String args[]) {
        System.out.println("I am father");
    }
}

class son extends father {
    public static void main(String args[]) {
        friend x = new friend();
        System.out.println("main");
        x.room();
        son y = new son();
    }
}
  
```

```

void room() {
    System.out.println("room in main");
}
  
```

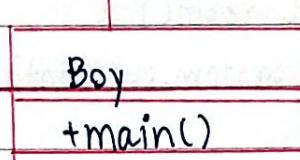
2.



```

interface koo {
    public int setvar();
}
  
```

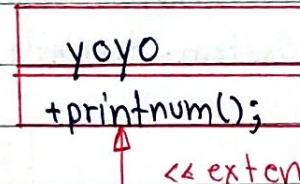
$\uparrow \text{<<extends>>}$ class boy extends koo {



```

}
public static void main(String args[]) {
}
  
```

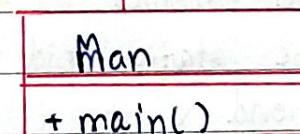
3.



```

class yoyo {
    public static void printnum() {
}
  
```

$\uparrow \text{<<extends>>}$

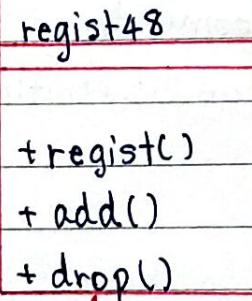


```

class Man extends yoyo {
    public static void main(String args[]) {
        printnum();
}
  
```

\uparrow

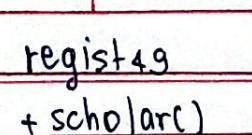
4.



```

public class regist48 {
    public regist() {}
    public add() {}
    public drop() {}
}
  
```

$\uparrow \text{<<extends>>}$



```

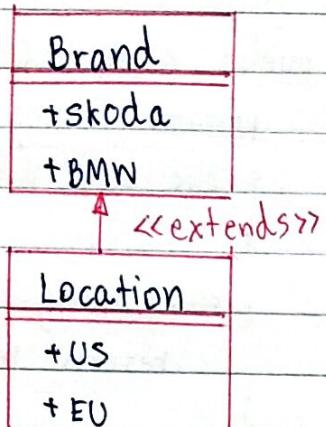
public class regist49 extends regist48 {
    public scholar() {}
}
  
```

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5.

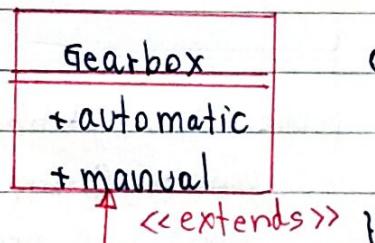


```

class Brand {
    private String skoda;
    private String BMW;
    private Location location;
}

class Location {
    private String US;
    private String EU;
}
  
```

6.

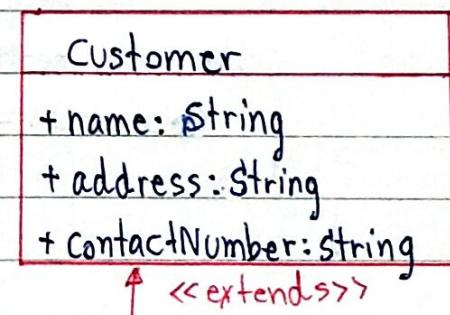


```

class car {
    private string color;
    private int weight;
}

class Gearbox {
    enum Gearbox {
        automatic, manual
    }
}
  
```

7.

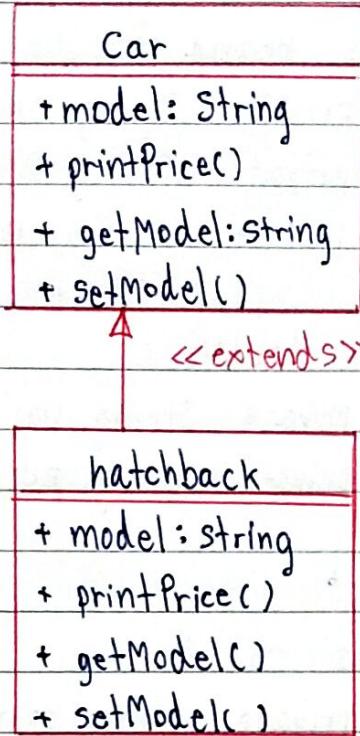


```

public class Customer {
    private String name;
    private String address;
    private String contactNumber;
}

public class Car {
    private String modelNumber;
    private Customer owner;
}
  
```

8.



```

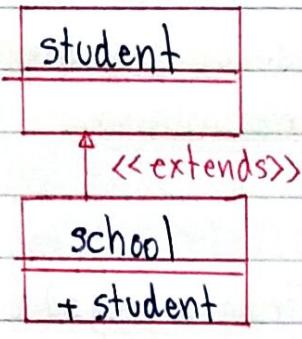
public class Car {
    private String model;
    public void printPrice() {
    }
    public String getModel() {
        return model;
    }
    public void setModel(String model) {
        this.model = model;
    }
}
public class hatchback extends car {
    private String model;
    public void printPrice() {
        System.out.println("Hatchback Price");
    }
    public String getModel() {
        return model;
    }
    public void setModel(String model) {
        this.model = model;
    }
}
  
```

The code defines the 'Car' class with a private attribute 'model' and methods for printing price, getting model, and setting model. It also defines the 'hatchback' class, which extends 'Car'. The 'hatchback' class overrides the 'printPrice' method to print "Hatchback Price". It also provides methods for getting and setting the model.

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9.



public class Student {

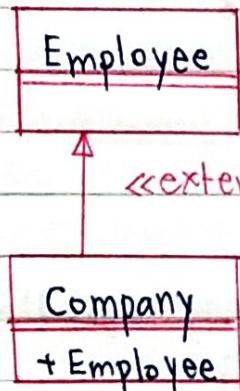
}

public class School {

private Student Student;

}

10.



public class Employee {

}

public class Company {

private Employee[] employee;

}

4. ຖັນເປົ້າຂຶ້ນ 10 ໂປຣ ການ ປະກາດຕີ່ຍິ່ງເຮືອງທ່າງເຊີຍ ມອບກໍາຕົກແປ່ນພິບທີ່ String
ກວ່າ: char ນົມວາກລວມພົນ ໃຫ້: ດຳເນີນໂປຣໂກຣມ

1. public class w001 {
 public static void main (String args[]) {
 String n[] = {"1", "2", "3"};
 System.out.println(n[0]);
 }

} // ດຳເນີນຄູ່ໃນ Array ລວມວ່ານີ້ Array നີ້ 0 ຢຸ່າ "1"

2. public class w002 {
 public static void main (String args[]) {
 String n[] = {"1", "2", "4"};
 System.out.println(n.length);
 }

} // ລວມພົນຄືຂອງ Array ທີ່ໄດ້ມີ ສົ່ງ "3"

3. import java.io.*;
 class w003 {
 public static void main (String args[]) throws IOException {
 String n[] = new String[3]; // Array ຊົ່ວງ / ອຳກັບຢືນຢັນ / ນີ້
 BufferedReader stdIn = new BufferedReader(new InputStreamReader(
 System.in));
 int y; // ອີ່ສົມມັນຕັ້ງກັນຄ່າ
 for (int i = 0; i <= 2; i++) {
 n[i] = stdIn.readLine(); }
 for (int i = 0; i <= 2; i++) {
 y = Integer.parseInt(n[i]);
 System.out.println((char)y + " "); }
 } // ມີຄູ່ໃນ Array ຊົ່ວງເພີ້ມ int ທີ່ແກ່ຕົວຢ່າງ y / ລວມວ່ານີ້ ລັບກໍານົດ int ພົນ
 char ວິທີກົດປົກກົດ

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4. class noo4{

```

public static void main(String args[]){
    int n[][] = {{1,2,3,4},{5,6,7}}; // 4x3 matrix
    int x = n[1][0]; // input Array में 1 रोप्तानी का Array नहीं
    System.out.println(x); } // output 5
}

```

5. public class noo5{

```

public static void main(String args[]){
    String n[] = {"value", "BMW"};
    for (String i : cars) { // cars का प्रियांकित करता है
        System.out.println(i); // output "value", "BMW"
    }
}

```

6. public static void main(String args[]){

```

char c = "a"; // a का प्रियांकित करता है
int a = Character.getNumericValue(c); // a का प्रियांकित करता है
System.out.println(a); // output 97
}

```

7. public static void main(String args[]){

```

char[] p = {"a", "b", "c"}; // a, b, c का प्रियांकित करता है
System.out.println("p=" + String.valueOf(p));
}
// p का प्रियांकित करता है जो String है

```

8. public static void main(String args[]){
 char[] n = new char[2]; // Usual practice
 p[0] = 97; p[1] = 48;
 System.out.println(p);
} // Wrong & to do

9. public static void main(String args[]){
 char[] n = new char[2]; // Usual practice
 p[0] = 65; p[1] = 66;
 System.out.println(p); // Wrong & to do AB instead of Array in char
}

10. public static void main (String args[]){
 char c = "a"; char a = "1"; int b = c; int d = a; // Usual practice
 System.out.println(b); // Wrong & to do 97
 System.out.println(d); // Wrong & to do 100 printing char instead of int
}

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5. ຈະເປີຍໃຫ້ 10 ປົບທາງວິທະຍາລະວົງ Substring / %. max min avg tot
ກວດວິທະຍາລະວົງພວກພົນ 10: ກຳອະນຸມາຊື່ໂທຮຽນ

```
1. class warn {
    public static void main(String args[]){
        int i = 12; int j = 13;
        System.out.println(Math.Max(i, j));
    }
}
```

ຄົນຄັ້ງ ສົດ 13

math.max ດັວກຕ່າງໆຂອງກົດຕົວທີ່ຕົວກັນຢູ່ຄໍາມາກຽນ

```
2. public class warn {
    public static void main(String args[]){
        string s = "kronvarin Putthanwong";
        System.out.println(s.substring(10)); // Putthanwong
    }
}
```

ພົບທາງວິທະຍາລະວົງພວກພົນ Substring ສົດ 10 ອົງລົມຢູ່ກົດຕົວທີ່

```
3. class warn02 {
    public static void main(String args[]){
        int i = 12; int j = 5;
        System.out.println(Math.min(i, j));
    }
}
```

ຄົນຄັ້ງ ສົດ 5

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```

4. class warn04 {
    public static void main(String args[]) {
        int i = 12; int j = 3;
        System.out.println(Math.min(i, j));
        System.out.println(Math.max(i, j));
    }
}

```

Output No 3, 12

```

5. package com.olnlab.share.static
import java.util.Scanner;
public class warn05 {
    Scanner scan = new Scanner(System.in);
    System.out.println("Enter number");
    int num = scan.nextInt();
    double sum = 0; // Initialize sum to 0
    for (int i = 0; i < num; i++) {
        sum += scan.nextInt();
    }
    System.out.println("avg" + sum / num);
}

```

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```

6. public class warn06 {
    public static void main (String args[]){
        String s = "Namnarn kronvarin";
        System.out.println (s.substring(0,10));
    }
}

```

ເປົ້າຈະກວດສອບຕົວຂອງກໍານົດທີ 0-6

```

7. public class warn07 {
    public static void main (String args[]){
        int product = 2000; int year = 0;
        while (product <= 5000){
            product = product + 360;
            year++;
            System.out.println ("ປີທີ = " + year + " ສູນສູນ = " + product);
        }
        System.out.println ("ກົດຕົວໃຫຍ່ " + year + " ປີ");
    }
}

```

```

8. public class warn08 {
    public static void main (String args[]){
        int i = 12; int j = 2;
        System.out.println (i/j);
    }
}

```

ກົດຕົວໃຫຍ່ ກົດຕົວໃຫຍ່ ກົດຕົວໃຫຍ່ ກົດຕົວໃຫຍ່ ກົດຕົວໃຫຍ່

9. public class warn9 {
 public static void main (String args[]){
 int i=12;
 System.out.println (i / 5);
 }

} *Tellinsatimugan i / 5 enzurong' g 2 naren'*

10. public class warn10 {
 public static void main (String args[]){
 int i=12; int j=3; int x=8;
 System.out.println (i / x / j);
 }

សេវាប្រព័ន្ធអីយ៉ា

- ការសរសែរ (Java keywords)

គេហទំនាក់ទំនង ឬកំណត់ដោយប្រព័ន្ធដែលបានក្លាយជាកូដ្ឋាមុន។ មិនអាមេរាតាមវិធី ឬរបៀប ដែលបានរាយការណ៍ឡើង។ ការសរសែរ ឬការប្រព័ន្ធ គឺជាការបង្កើតការងារ ឬការបង្កើតការ នៃកូដ្ឋាម។

- key words

abstract, assert, boolean, break, byte, case, catch, char, class, const, continue, default, do, double, else, extends, final, finally, float, for, go to, if, implement, import, instanceof, int, interface, long, native, new, package, private, protected, public, return, short, static, strictfp, super, switch, synchronized, this, throw, throws, transient, try, void, volatile, while

- class Diagram

```
class test {
    void room() {
        System.out.println("Namwann");
    }
}
```

// នេះជារូបរាង class នៃកូដ្ឋាម
ដែលបង្កើតឡើងជាកូដ្ឋាម 2 កូដ្ឋាម
ប៉ុណ្ណោះ

```
class extends test {
    public static void main (String args[]) {
        String i = new test();
        i.room();
    }
}
```

- substring (s.substring(8)); ផ្តល់នូវការថា char នៃ string នឹងមិន
ត្រូវភាពចំណាំ នៅក្នុងការបញ្ចូន (8) នូយក់ និងសម្រាប់ការបញ្ចូន s ក្នុង
string នឹងនូវការកែត្រូវក្នុង