

1: Program to print hello world

```
import java.io.*;

public class hello
{
    public static void main(String[] args)
    {
        System.out.println("Hello World");
    }
}
```

output:

A screenshot of a Java IDE's terminal window. The window has tabs for 'PROBLEMS', 'OUTPUT', and 'TERMINAL', with 'TERMINAL' selected. The title bar says '1: Java Debug Console'. The terminal shows a command prompt 'bash-5.0\$' followed by a long command to run a Java program. The output of the program is displayed as 'hello' and 'Hello World' on two separate lines. The prompt 'bash-5.0\$' is shown again at the end. At the bottom of the terminal, there is a status bar showing 'Ln 6, Col 2', 'Spaces: 4', 'UTF-8', 'LF', 'Java', and 'JavaSE-15'.

2: Program to find the largest of three numbers

```
import java.io.*;

import java.util.*;

public class large
```

```

{
public static void main(String[] args)
{
Scanner sc=new Scanner(System.in);
int a,b,c;
System.out.println("Enter the first number");
a=sc.nextInt();
System.out.println("Enter the second number");
b=sc.nextInt();
System.out.println("Enter the third number");
c=sc.nextInt();
if(a>b&& a>c)
System.out.println(a + " " + "Is largest");
else if(b>a&& b>c)
System.out.println(b + " " + "Is largest");
else
System.out.println(c + " " + "Is Largest");
}
}

```

output:

```
PROBLEMS 3 OUTPUT DEBUG CONSOLE TERMINAL 2: Java Debug Conso
    at java.base/java.util.Scanner.nextInt(Scanner.java:2212)
    at large.main(large.java:10)
bash-5.0$ cd /Users/adityaparakasha/Developer/java ; /Library/Java/JavaVirtualMachines/jdk-15.jdk
/Contents/Home/bin/java -agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=localhost:5
0614 --enable-preview -XX:+ShowCodeDetailsInExceptionMessages -Dfile.encoding=UTF-8 -cp "/Users/a
dityaparakasha/Library/Application Support/Code/User/workspaceStorage/cfbc9c7f24e20b2c0e1ac38bf24b
d34d/redhat.java/jdt_ws/java_895310d3/bin" large
Enter the first number
1
Enter the second number
2
Enter the third number
3
3 Is Largest
bash-5.0$
```

3 : Program to print the values from 1 to n

```
import java.util.*;

public class input
{
    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);
        int n;

        System.out.println("Enter the value of n"); n=sc.nextInt();

        System.out.println("Printing the values from 1 to n");

        for(int i=1;i<=n;i++)

        {
            System.out.println(i);
        }
    }
}
```

```
}  
  
}
```

output:



The screenshot shows a terminal window titled "2: Java Debug Conso". The command prompt is "bash-5.0\$". The command executed is: `/Library/Java/JavaVirtualMachines/jdk-15.jdk/Contents/Home/bin/java -agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=localhost:50653 --enable-preview -XX:+ShowCodeDetails InExceptionMessages -Dfile.encoding=UTF-8 -cp "/Users/adityaprakasha/Library/Application Support/Code/User/workspaceStorage/cfbc9c7f24e20b2c0e1ac38bf24bd34d/redhat.java/jdt_ws/java_895310d3/bin" input`. The program prompts "Enter the value of n" and the user enters "6". The program then prints "Printing the values from 1 to n" and lists the numbers 1 through 6. The terminal ends with the prompt "bash-5.0\$".

```
bash-5.0$ /Library/Java/JavaVirtualMachines/jdk-15.jdk/Contents/Home/bin/java -agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=localhost:50653 --enable-preview -XX:+ShowCodeDetails InExceptionMessages -Dfile.encoding=UTF-8 -cp "/Users/adityaprakasha/Library/Application Support/Code/User/workspaceStorage/cfbc9c7f24e20b2c0e1ac38bf24bd34d/redhat.java/jdt_ws/java_895310d3/bin" input
Enter the value of n
6
Printing the values from 1 to n
1
2
3
4
5
6
bash-5.0$
```

4: Write a program to print the pattern

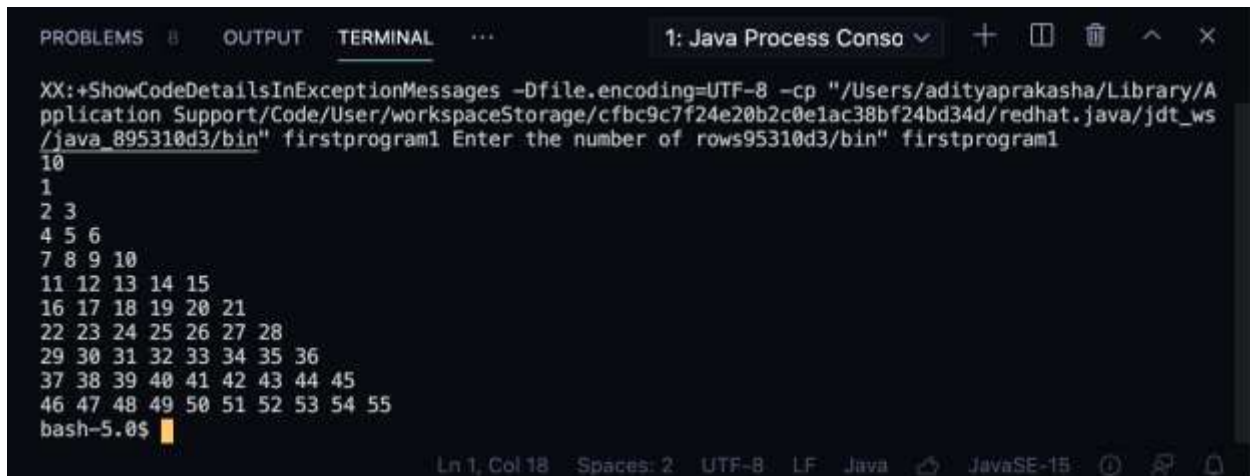
```
import java.io.*;
import java.util.*;
import java.lang.*;
public class firstprogram1
{
    public static void pattern(int n)
    {
        int k=1;
        for(int i=1;i<=n;i++)
```

```

    {[ ]SEP}
    for(int j=1;j<=i;j++)
    {[ ]SEP}
    System.out.print(k + " ");
    k++;
}
System.out.println();
}
}[ ]SEP}
public static void main(String[] args)
{[ ]SEP}
    Scanner sc=new Scanner(System.in);[ ]SEP
    int num;[ ]SEP
    System.out.println("Enter the number of rows");
    num=sc.nextInt();
    pattern(num);
}
}

```

output:



The screenshot shows a terminal window titled "1: Java Process Conso". The command executed is: `XX:+ShowCodeDetailsInExceptionMessages -Dfile.encoding=UTF-8 -cp "/Users/adityaprakasha/Library/Application Support/Code/User/workspaceStorage/cfbc9c7f24e20b2c0e1ac38bf24bd34d/redhat.java/jdt_ws/java_895310d3/bin" firstprogram1`. The program's output is a grid of numbers: 10, 1, 2 3, 4 5 6, 7 8 9 10, 11 12 13 14 15, 16 17 18 19 20 21, 22 23 24 25 26 27 28, 29 30 31 32 33 34 35 36, 37 38 39 40 41 42 43 44 45, 46 47 48 49 50 51 52 53 54 55. The prompt is `bash-5.0$`. The status bar at the bottom indicates "Ln 1, Col 18", "Spaces: 2", "UTF-8", "LF", "Java", and "JavaSE-15".

5: program to calculate the grade from cie and see

```
import java.io.*;
import java.lang.*;
import java.util.*;

public class cie_and_see
{
    private static double cie;
    private static double see;

    public static void read()
    {
        Scanner sc=new Scanner(System.in);

        System.out.println("Enter the CIE marks out of 50");
        cie=sc.nextFloat();

        System.out.println("Enter the SEE marks out of 100");
        see=sc.nextFloat();
    }
}
```

```

}

public static void calc()

{
    read();
    double total=Math.round(cie+((see)/2));

    System.out.println("Total marks obtained is " + total);
    if(total>=90&&total<=100)
    {
        System.out.println("Grade obtained is " + "S");
    }
    else if(total>=80&&total<90)
    {
        System.out.println("Grade obtained is " + "A");
    }
    else if(total>=70&&total<80)
    {
        System.out.println("Grade obtained is " + "B");
    }
    else if(total>=60&&total<70)
    {
        System.out.println("Grade obtained is " + "C");
    }
    else if(total>=50&&total<60)

```

```

{
System.out.println("Grade obtained is " + "D");
}
else if(total>=40&&total<50)
{
System.out.println("Grade obtained is " + "E");
}
else
{
System.out.println("Grade obtained is " + "F");
}
}

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

```

output:



A screenshot of a terminal window with a dark background. The window title is "2: Java Process Consc". The terminal shows the output of a Java program. The output text is: "bash-5.0\$ /Library/Java/JavaVirtualMachines/jdk-15.jdk/Contents/Home/bin/java --enable-preview -XX:+ShowCodeDetailsInExceptionMessages -Dfile.encoding=UTF-8 -cp "/Users/adityaprakasha/Library/Application Support/Code/User/workspaceStorage/cfbc9c7f24e20b2c0e1ac38bf24bd34d/redhat.java/jdt\_ws/java\_895310d3/bin" cie\_and\_see", "Enter the CIE marks out of 50", "45", "Enter the SEE marks out of 100", "87", "Total marks obtained is 89.0", "Grade obtained is A", "bash-5.0\$". At the bottom of the terminal, there is a status bar showing "Ln 44, Col 1", "Spaces: 4", "UTF-8", "LF", "Java", and "JavaSE-15".

```
bash-5.0$ /Library/Java/JavaVirtualMachines/jdk-15.jdk/Contents/Home/bin/java --enable-preview -XX:+ShowCodeDetailsInExceptionMessages -Dfile.encoding=UTF-8 -cp "/Users/adityaprakasha/Library/Application Support/Code/User/workspaceStorage/cfbc9c7f24e20b2c0e1ac38bf24bd34d/redhat.java/jdt_ws/java_895310d3/bin" cie_and_see
Enter the CIE marks out of 50
45
Enter the SEE marks out of 100
87
Total marks obtained is 89.0
Grade obtained is A
bash-5.0$
```

6: write a program to print all prime numbers between two numbers

```
import java.io.*;
import java.lang.*;
import java.util.*;

public class prime
{
    public static boolean checkprime(int n)
    {
        int flag=1;for(int i=2;i<=n/2;i++)
        {
            if(n%i==0)
            {
                flag=0; break;
            }
        }
    }
}
```

```

    }
    if(flag==1)
    {
        return true;
    }
    else
    {
        return false;
    }
}
}
}

public static void main(String[] args)
{
    int a,b;
    Scanner sc=new Scanner(System.in);
    System.out.println("Enter the first number");
    a=sc.nextInt();
    System.out.println("Enter the second number");
    b=sc.nextInt();
    System.out.println("Prime numbers are ");
    for(int i=a;i<=b;i++)
    {
        if(checkprime(i))
        {

```

```

System.out.println(i + " " + "is prime");
}
}
}
}
}

```

output:



```

4: Java Process Consc
application Support/Code/User/workspaceStorage/cfbc9c7f24e20b2c0e1ac38bf24bd34d/redhat.java/jdt_ws
/java_895310d3/bin" prime
Enter the first number
6
Enter the second number
30
Prime numbers are
7 is prime
11 is prime
13 is prime
17 is prime
19 is prime
23 is prime
29 is prime
bash-5.0$

```

7:Program to count the number of students registered for the particular course:

```

#include<stdio.h>

#include<string.h>[SEP]

int iot;

int advanced_java;[SEP]

int advanced_data;

```

```

typedef struct student
{
char name[50];
char course[50];
}

std;

int main()
{
char elective1[50]="Internet Of Things";
char elective2[50]="Advanced Java And J2EEE";
char elective3[50]="Advanced DataStructures";

printf("Courses available are \n \t 1:Internet Of Things\n \t2:Advanced Java And
J2EEE\n \t3:Advanced DataStructures\n");

int n;[SEP]
int choice;[SEP]

printf("Enter the number of students\n");

scanf(" %d",&n);[SEP]std s[n];[SEP]for(int i=0;i<n;i++)[SEP]
{
printf("Enter the name of student %d \n",(i+1));

scanf(" %s", s[i].name);

fflush(stdin);

printf("Enter the elective of student %d \n",(i+1)); printf("enter your choice\n");

fflush(stdin);[SEP]

```

```

scanf(" %d",&choice);

switch(choice)
{
    case 1:
        strcpy(s[i].course,elective1);
        break;
    case 2: strcpy(s[i].course,elective2);
        break;
    case 3: strcpy(s[i].course,elective3);
        break;
}

fflush(stdin);

for(int i=0;i<n;i++)
{
    if(strncmp(elective1,s[i].course,strlen(elective1))==0)
    {
        printf("Student %s has selected for %s course\n",s[i].name,s[i].course);
        iot++;
    }

    if(strncmp(elective2,s[i].course,strlen(elective2))==0)
    {
        printf("Student %s has selected for %s course\n",s[i].name,s[i].course);

```

```

advanced_java++;

}

if(strncmp(elective3,s[i].course,strlen(elective3))==0)

{

printf("Student %s has selected for %s course\n",s[i].name,s[i].course);

advanced_data++;

}

}

printf("*****\n");

printf("Number of student applied for internet of things is %d\n",iot);

printf("Number of students applied for Advanced java and J2EEE is %d\n",advanced_java);

printf("Number of student applied for Advanced DataStructures is %d\n",advanced_data);

if(iot<30)

{

for(int i=0;i<n;i++)

{

if(strncmp(s[i].course,elective1,strlen(elective1))==0)

{

printf(" %s please select from the other two course this course cannot be floated\n",s[i].name);

printf("2:Advanced Java And J2EEE\n3:Advanced DataStructures\n");

printf("Enter your new choice\n");scanf(" %d",&choice);

```

```

iot=0;

switch(choice)

{

case 2: strcpy(s[i].course,elective2); advanced_java++;break;
case 3: strcpy(s[i].course,elective3); advanced_data++;break;

}

}

}

}

if(advanced_java<30)

{

for(int i=0;i<n;i++)

{

if(strncmp(s[i].course,elective2,strlen(elective2))==0)

{

printf(" %s please select from the other two course this course cannot be
floated\n",s[i].name);

printf("1:Internet Of Things\n3:Advanced DataStructures\n");

printf("Enter your new choice\n");

scanf(" %d",&choice);

advanced_java=0;

switch(choice)

{

```

```

case 1: strcpy(s[i].course,elective1);
iot++;
break;

case 3: strcpy(s[i].course,elective3);
advanced_data++;
break;

}

}

}

}

if(advanced_data<30)
{
for(int i=0;i<n;i++)
{
if(strncmp(s[i].course,elective3,strlen(elective3))==0)
{
printf(" %s please select from the other two course this course cannot be
floated\n",s[i].name);

printf("1:Internet Of Things\n2:Advanced JAVA and J2EEE\n");

printf("Enter your new choice\n");

scanf(" %d",&choice);

advanced_data=0;

switch(choice)

```



```

    {
        case 1: strcpy(s[i].course,elective1); iot++;
        break;
        case 2: strcpy(s[i].course,elective2);
        advanced_java++;
        break;
    }
}
}
}
}

printf("*****AfterReselection*****\n");

printf("Number of student applied for internet of things is %d\n",iot);

printf("Number of students applied for Advanced java and J2EEE is
%d\n",advanced_java);

printf("Number of student applied for Advanced DataStructures is
%d\n",advanced_data);
printf("*****\n");

for(int i=0;i<n;i++)
{
    printf("%s has selected %s course\n",s[i].name,s[i].course);
}
}
}

```

output:

```

input
Courses available are
    1:Internet Of Things
    2:Advanced Java And J2EEE
    3:Advanced DataStructures
Enter the number of students
2
Enter the name of student 1
nikhil
Enter the elective of student 1
enter your choice
2
Enter the name of student 2
arjun
Enter the elective of student 2
enter your choice
3
Student nikhil has selected for Advanced Java And J2EEE course
Student arjun has selected for Advanced DataStructures course
*****
Number of student applied for internet of things is 0
Number of students applied for Advanced java and J2EEE is 1
Number of student applied for Advanced DataStructures is 1
    nikhil please select from the other two course this course cannot be floated
1:Internet Of Things
3:Advanced DataStructures
Enter your new choice
1
    arjun please select from the other two course this course cannot be floated
1:Internet Of Things
2:Advanced JAVA and J2EEE
Enter your new choice
3
*****AfterReselection*****
Number of student applied for internet of things is 1
Number of student applied for Advanced Java and J2EEE is 0
Number of student applied for Advanced Datastructures is 0
*****

```

```

Student nikhil has selected for Advanced Java And J2EEE course
Student arjun has selected for Advanced DataStructures course
*****
Number of student applied for internet of things is 0
Number of students applied for Advanced java and J2EEE is 1
Number of student applied for Advanced DataStructures is 1
    nikhil please select from the other two course this course cannot be floated
1:Internet Of Things
3:Advanced DataStructures
Enter your new choice
1
    arjun please select from the other two course this course cannot be floated
1:Internet Of Things
2:Advanced JAVA and J2EEE
Enter your new choice
3
*****AfterReselection*****
Number of student applied for internet of things is 1
Number of student applied for Advanced Java and J2EEE is 0
Number of student applied for Advanced Datastructures is 0
*****
nikhil has selected Internet Of Things course
arjun has selected Advanced DataStructures course

...Program finished with exit code 0
Press ENTER to exit console.

```