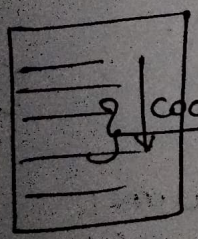
conditional statements

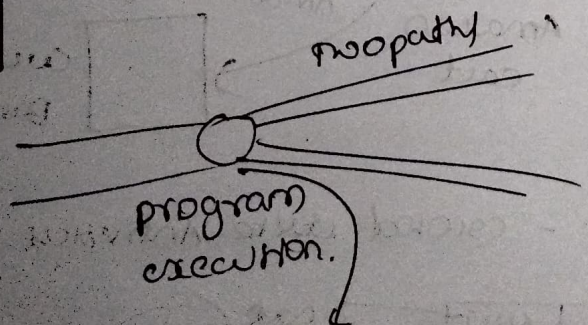
01-09-2025

* Why we need conditional statements?
* Where it is used in the industry or coding
  * Logical bugs - shopping cart
  * Error handling - crowdstrike.
* types of pattern of conditional statements - injava.
* How to write clear and clean conditional statemnt.
* sample examples -
  1) is number positive
  2) is number positive or negative
  3) classify student percentage into distraction, first class
  4) convert day month in digit to word ex: if input is 15 then return may
  5) Greater or smaller number using conditional operator

→



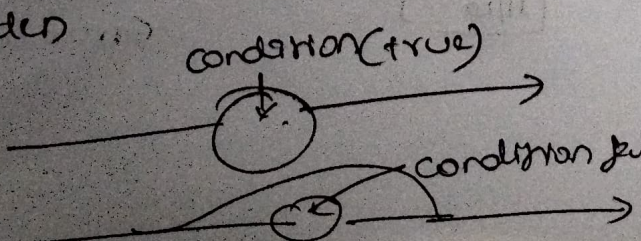
need to be executed based on condition.



condition choose any one path.

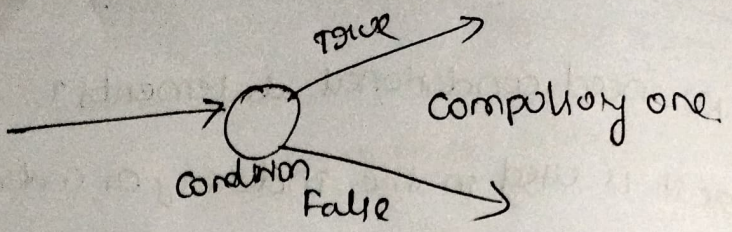
Different pattern ...

pattern 1:

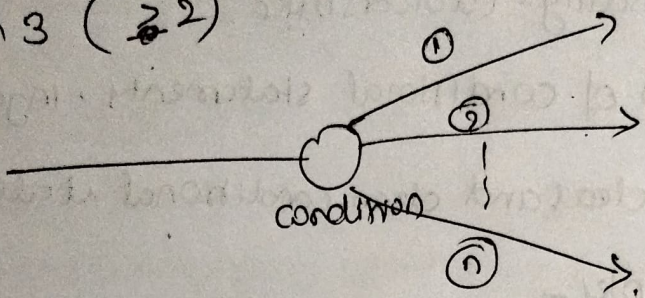


pattern 2

if - else.



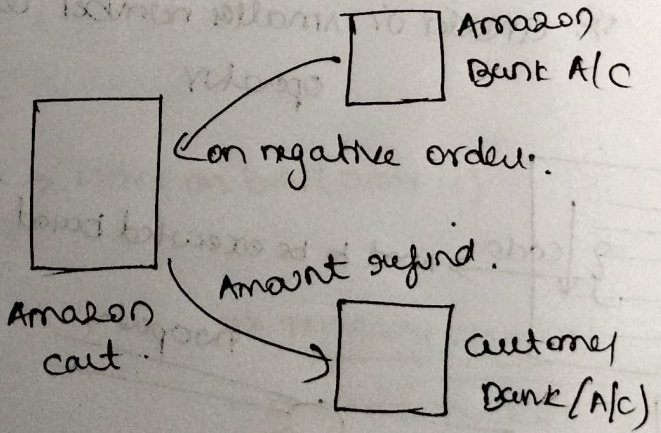
pattern 3 (≥ 2)



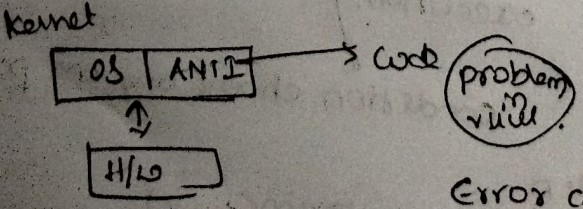
Example

Amazon - payment incident

↳ the customer selects products as -1, -2, or -n, in this case the amount refunded or credit to customer account from amazon bank account.



Blue - screen error. - caused due to Antivirus



condition statement / ternary.

(condition) ? true : false;

eg:

a > b ? a is greater : b is greater;

switch

```
switch(condition)
    {
    case 1: ___ break;
    case 2: ___ break;
      .
      .
    case n: ___ break;
    default: ___ break;
    }
```

Aptitude 01-Sep-2025

unit digit cyclicity.

0, 1, 5, 6	2, 3, 7, 8	4, 9
same ↓	4 cyclic	$4^{odd} = 4$
last digit 0, 1, 5, 6	↓	$4^{even} = 6$
$(5)^2 = 25$	ex:	$9^{odd} = 9$
$(6)^2 = 36$	$2^1 = 2$	$9^{even} = 1$
	① $2^2 = 4$	
	② $2^3 = 8$	
	③ $2^4 = 16$	
	④ $2^5 = 32$	

Q: Find the unit digit of $(2153)^{167} \times (8267)^{153}$

(a) 1 (b) 3 (c) 7 (d) 9.

$(3)^{167} \times (7)^{153}$

$(3)^3 \times 7^1$ ← $\frac{167}{4}$ Rem = 3 ← $\frac{41}{4}$

$\frac{27 \times 7}{9}$

For 2, 3, 7, 8

↳ powers of 4. ← remainder = 0 ← same $(2)^4$

4) 153 (38
12
33
32
1

$\frac{27 \times 7}{9}$

② $(432)^{412} \times (499)^{43}$ (a) 2, (b) 4, (c) 6 (d) 8

$(2)^{412} \times (9)^{43}$

$\frac{412}{4}$ (3

$(2)^4 \times 9$

$= 16 \times 9 = 5$ ④

③ $(217)^{413} \times (819)^{547} \times (414)^{624} \times (342)^8$

(a) 2 (b) 4 (c) 6 (d) 8.

$(7)^{413} \times (9)^{547} \times (4)^{624} \times (2)^8$

$\frac{413}{4}$ (3 $\frac{156}{4}$ (0

$(7)^1 \times 9 \times (4)^0 \times (2)^4 =$

$7 \times 9 \times 6 \times 16$

$63 \to 3$ $18 \to 8$ $48 \to 8$

Q: $x = (164)^{169} + (333)^{337} - (527)^{726}$ (a) 7 b) 9 c) 8 d) 5

$(4)^{169} + (3)^{337} - (7)^{726}$

$= 4 + 3 - (7)^2$

$= 4 + 3 - 49$

$= 7 - 9$

$= -2$ · carry = 10 − 2 = 8

Q: $((137)^{13})^{47}$ a) 7 b) 9 c) 8 d) 3

$\hookrightarrow (137)^{13 \times 47}$

$(7)^{\frac{13}{4} \times \frac{47}{4}}$

$(7)^{1 \times 3}$

$(7)^3$

$= aa \times 7$

3

Q: $7^{41} - 3^{14}$; a) 3 b) 4 c) 6 d) 7

$= 7^3 - 7^2$

$3 - 9$

$3 - 9$

-6

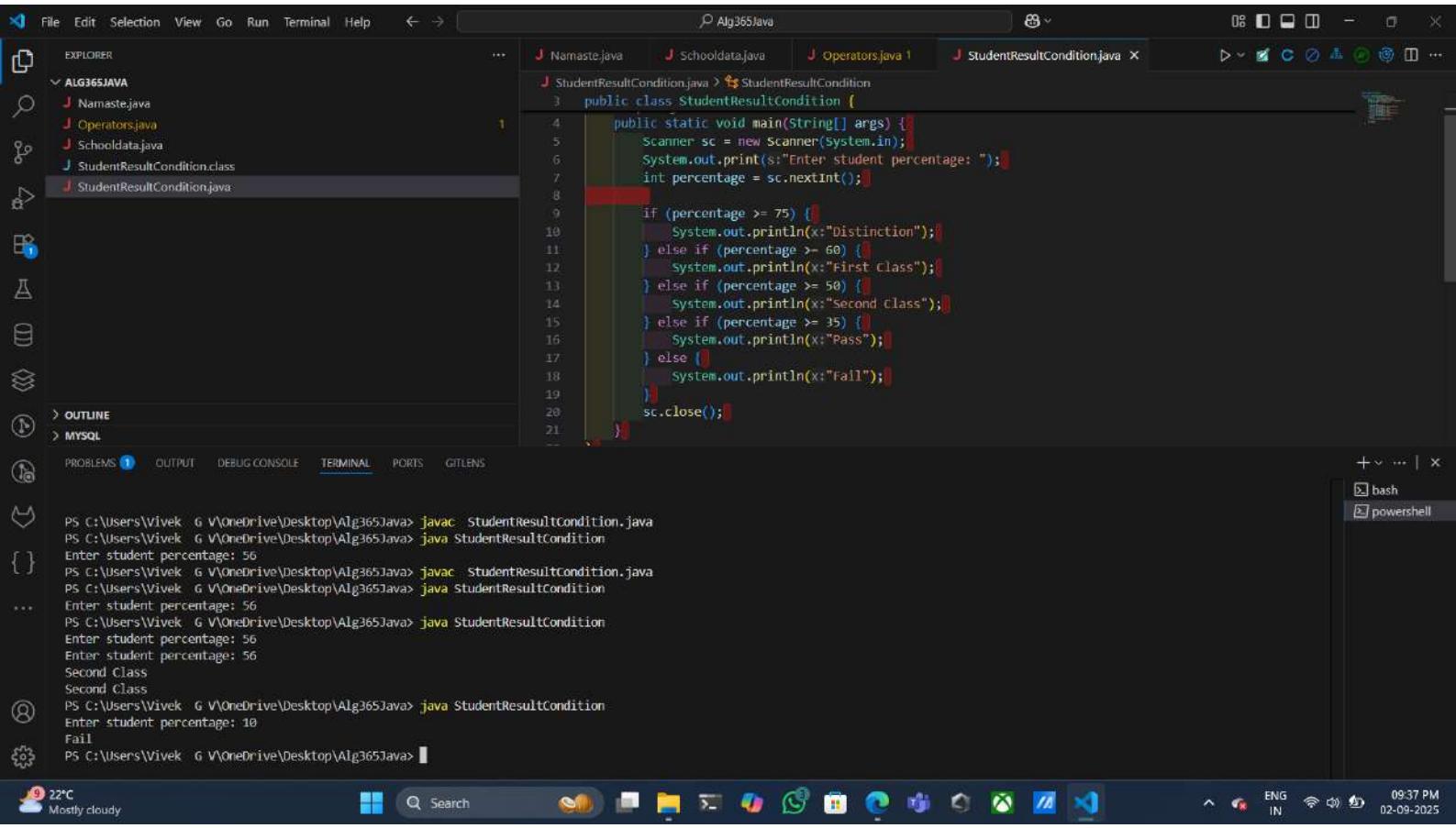
Q: unit digit of product of all prime no's

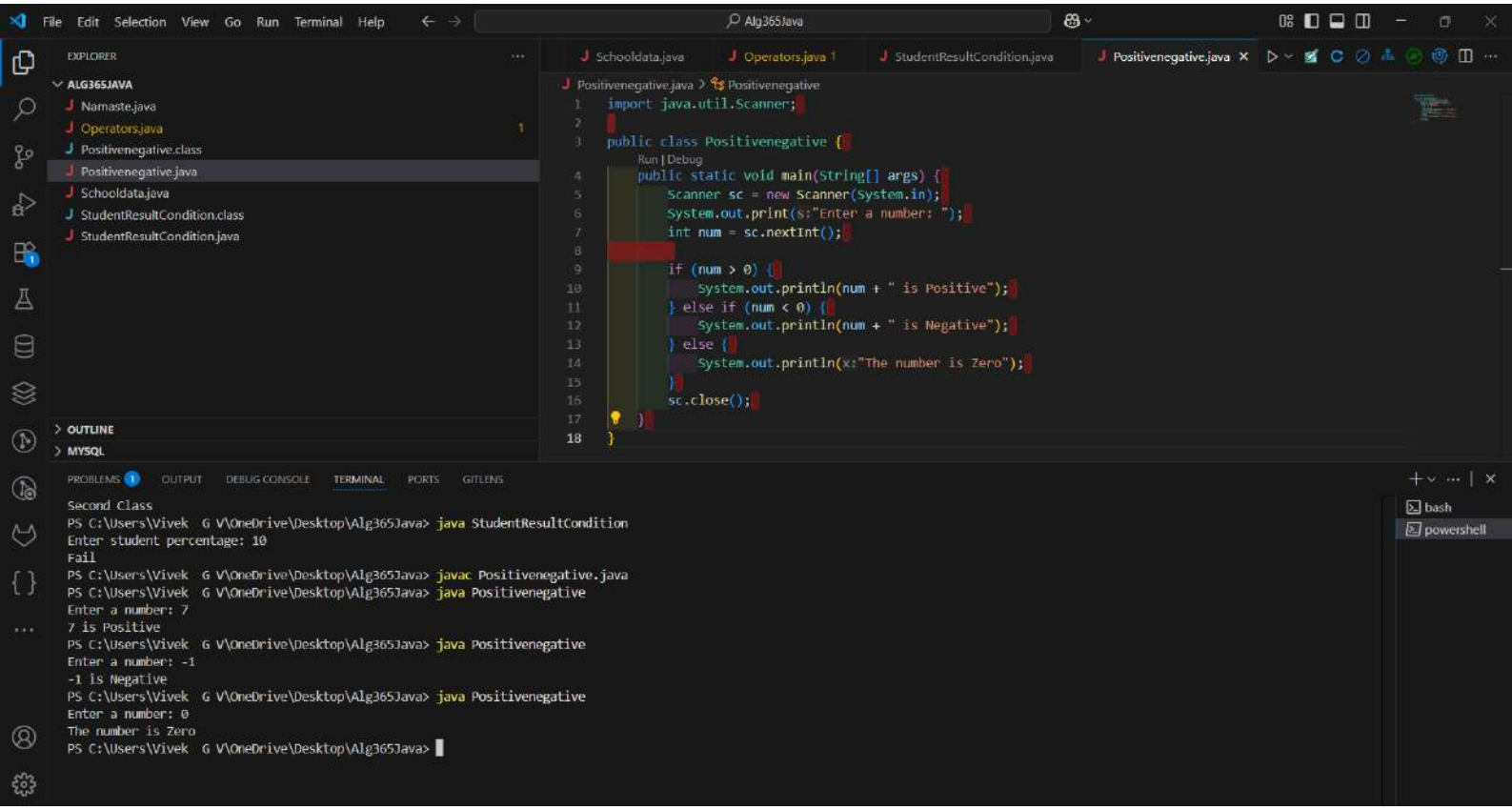
a) 0 b) 1 c) 2 d) 5

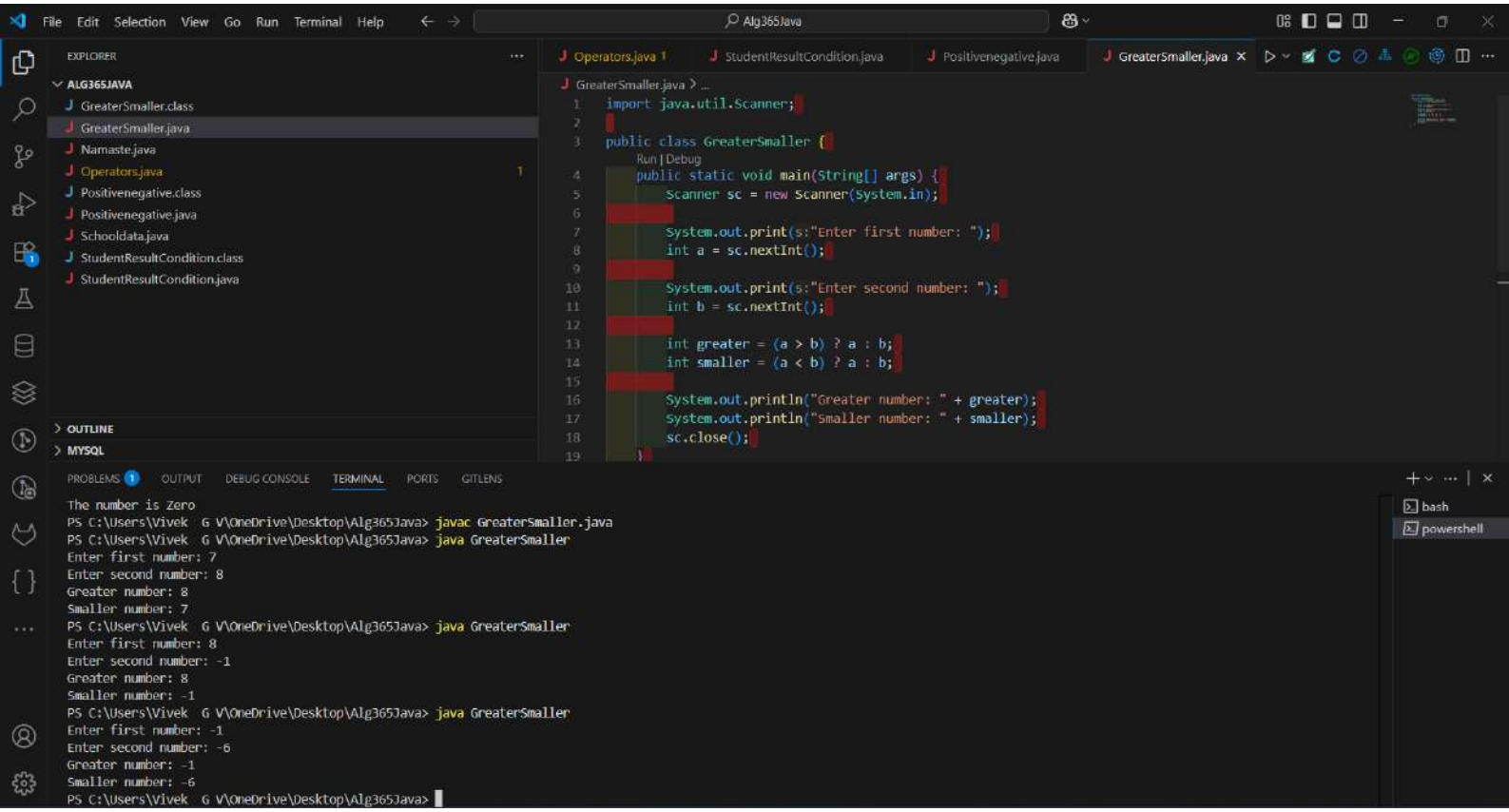
$2 \times 3 \times 5$

6×5

30×5


File Edit Selection View Go Run Terminal Help
Alg365Java
EXPLORER
ALG365JAVA
Namaste.java
Operators.java 1
Schooldata.java
StudentResultCondition.class
StudentResultCondition.java
Namaste.java
Schooldata.java
Operators.java 1
StudentResultCondition.java
StudentResultCondition.java > StudentResultCondition
3 public class StudentResultCondition {
4 public static void main(String[] args) {
5 Scanner sc = new Scanner(System.in);
6 System.out.print(s:"Enter student percentage: ");
7 int percentage = sc.nextInt();
8
9 if (percentage >= 75) {
10 System.out.println(x:"Distinction");
11 } else if (percentage >= 60) {
12 System.out.println(x:"First Class");
13 } else if (percentage >= 50) {
14 System.out.println(x:"Second Class");
15 } else if (percentage >= 35) {
16 System.out.println(x:"Pass");
17 } else {
18 System.out.println(x:"Fail");
19 }
20 sc.close();
21 }
OUTLINE
MYSQL
PROBLEMS 1
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
GITLENS
bash
powershell
PS C:\Users\Vivek G V\OneDrive\Desktop\Alg365Java> javac StudentResultCondition.java
PS C:\Users\Vivek G V\OneDrive\Desktop\Alg365Java> java StudentResultCondition
Enter student percentage: 56
PS C:\Users\Vivek G V\OneDrive\Desktop\Alg365Java> javac StudentResultCondition.java
PS C:\Users\Vivek G V\OneDrive\Desktop\Alg365Java> java StudentResultCondition
Enter student percentage: 56
PS C:\Users\Vivek G V\OneDrive\Desktop\Alg365Java> java StudentResultCondition
Enter student percentage: 56
Enter student percentage: 56
Second Class
Second Class
PS C:\Users\Vivek G V\OneDrive\Desktop\Alg365Java> java StudentResultCondition
Enter student percentage: 10
Fail
PS C:\Users\Vivek G V\OneDrive\Desktop\Alg365Java>
22°C
Mostly cloudy
Search
ENG
IN
09:37 PM
02-09-2025


File Edit Selection View Go Run Terminal Help
Alg365Java
EXPLORER
ALG365JAVA
Namaste.java
Operators.java 1
Positivenegative.class
Positivenegative.java
Schooldata.java
StudentResultCondition.class
StudentResultCondition.java
OUTLINE
MYSQL
Schooldata.java
Operators.java 1
StudentResultCondition.java
Positivenegative.java
Positivenegative.java > Positivenegative
import java.util.Scanner;
public class Positivenegative {
Run | Debug
public static void main(String[] args) {
Scanner sc = new Scanner(System.in);
System.out.print(s:"Enter a number: ");
int num = sc.nextInt();
if (num > 0) {
System.out.println(num + " is Positive");
} else if (num < 0) {
System.out.println(num + " is Negative");
} else {
System.out.println(x:"The number is Zero");
}
sc.close();
}
}
PROBLEMS 1
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
GITLENS
Second Class
PS C:\Users\Vivek G V\OneDrive\Desktop\Alg365Java> java StudentResultCondition
Enter student percentage: 10
Fail
PS C:\Users\Vivek G V\OneDrive\Desktop\Alg365Java> javac Positivenegative.java
PS C:\Users\Vivek G V\OneDrive\Desktop\Alg365Java> java Positivenegative
Enter a number: 7
7 is Positive
PS C:\Users\Vivek G V\OneDrive\Desktop\Alg365Java> java Positivenegative
Enter a number: -1
-1 is Negative
PS C:\Users\Vivek G V\OneDrive\Desktop\Alg365Java> java Positivenegative
Enter a number: 0
The number is Zero
PS C:\Users\Vivek G V\OneDrive\Desktop\Alg365Java>
bash
powershell


File Edit Selection View Go Run Terminal Help
Alg365Java
EXPLORER
ALG365JAVA
GreaterSmaller.class
GreaterSmaller.java
Namaste.java
Operators.java 1
Positivenegative.class
Positivenegative.java
Schooldata.java
StudentResultCondition.class
StudentResultCondition.java
OUTLINE
MYSQL
Operators.java 1
StudentResultCondition.java
Positivenegative.java
GreaterSmaller.java
GreaterSmaller.java > ...
1 import java.util.Scanner;
2
3 public class GreaterSmaller {
Run | Debug
4 public static void main(String[] args) {
5 Scanner sc = new Scanner(System.in);
6
7 System.out.print(s:"Enter first number: ");
8 int a = sc.nextInt();
9
10 System.out.print(s:"Enter second number: ");
11 int b = sc.nextInt();
12
13 int greater = (a > b) ? a : b;
14 int smaller = (a < b) ? a : b;
15
16 System.out.println("Greater number: " + greater);
17 System.out.println("smaller number: " + smaller);
18 sc.close();
19 }
PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS
The number is Zero
PS C:\Users\Vivek G V\OneDrive\Desktop\Alg365Java> javac GreaterSmaller.java
PS C:\Users\Vivek G V\OneDrive\Desktop\Alg365Java> java GreaterSmaller
Enter first number: 7
Enter second number: 8
Greater number: 8
Smaller number: 7
PS C:\Users\Vivek G V\OneDrive\Desktop\Alg365Java> java GreaterSmaller
Enter first number: 8
Enter second number: -1
Greater number: 8
Smaller number: -1
PS C:\Users\Vivek G V\OneDrive\Desktop\Alg365Java> java GreaterSmaller
Enter first number: -1
Enter second number: -6
Greater number: -1
Smaller number: -6
PS C:\Users\Vivek G V\OneDrive\Desktop\Alg365Java>
bash
powershell