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1	<div>Day 17 Criteria</div> <div>Day 17 Criteria</div> <div>Write a program to generate the below series: 0,2,3,5,8,10,15,17,24,26,...</div> <div>Input Format: Input consists of a single integer that corresponds to n.</div> <div>Output Format: The output consists of the terms in the series separated by a blank space.</div> <div>Sample Input 1: 11</div> <div>Sample Output 1: 0 2 3 5 8 10 15 17 24 26 35</div> <div>Sample Input 2: 20</div> <div>Sample Output 2: 0 2 3 5 8 10 15 17 24 26 35 37 48 50 63 65 80 82 99 101</div>	<pre>import java.util.*; import java.io.*; public class Main { public static void main(String[] args) { //fill your code here Scanner sc=new Scanner(System.in); int count=0, i=0, j=2, k=1, l=1; for (int n=sc.nextInt(); count < n ;count++){ int temp; if(count % 2==0)temp=count !=0?i=i+(k=k+2):i; else temp = j= count !=1 ? j+(l=l+2):j; System.out.printf("%d\t",temp); }</pre>
2	<div>Alphabet Patterns 4</div> <div>Write a program to print the given pattern.</div> <div>Input Format: Input consists of a single integer which corresponds to the number of rows..</div> <div>Output Format: Refer sample output.</div> <div>Sample Input: 5</div> <div>Sample Output: E ED EDC EDCB EDCBA</div>	<pre>import java.util.*; public class Main { public static void main(String[] args) { int i,j,n; Scanner s = new Scanner(System.in); n= s.nextInt(); for(i=n;i>=1;i--) {for(j=n;j>=i;j--) {System.out.print((char)(j+64)); } System.out.println(); } } }</pre>
3	<div>Pattern 3</div> <div>Write a program to print the given pattern.</div> <div>Input Format:Input consists of a single integer.</div> <div>Output Format: Refer sample outputs. There is a trailing space at the end of each line.</div>	<pre>import java.util.*; public class Main { public static void main(String[] args) {</pre>

	<p>Sample Input: 5</p> <p>Sample Output: 5 4 3 2 1 4 3 2 1 3 2 1 2 1 1</p>	<pre>Scanner sc = new Scanner(System.in); int n = sc.nextInt(); for(int x=n;x>=1;x--) { for (int y=x;y>0;y--) System.out.print(y + " "); System.out.println(); } }</pre>
4	<p>Day 13 Criteria</p> <p>Write a program to generate the below series: 5,17,37,65,145, 197,....</p>  <p>Input Format: Input consists of a single integer which corresponds to n.</p> <p>Output Format: Output consists of the terms in the series separated by a blank space.</p> <p>Sample Input 1: 6</p> <p>Sample Output 1: 5 17 37 65 101 145</p> <p>Sample Input 2: 15</p> <p>Sample Output 2: 5 17 37 65 101 145 197 257 325 401 485 577 677 785 901</p>	<pre>import java.util.Scanner; public class Main { public static void main(String[] args) { Scanner sc =new Scanner(System.in); int n=sc.nextInt(); int a=2; for(int i=1;i<=n;i++) { System.out.println(((a*a)+1)+" "); a=2*(i+1); } } }</pre>
5	<p>SECRET 7</p> <p>The Secret 7 is a secret investigation team consisting of 7 members. The team members meet once every fortnight. The Famous 5 is a rival gang and they try to steal secrets from secret seven. In each of their meets they decide a passcode for the next meet. The passcode they set is a 4 digit number with same numbers in the even places and odd places. Your friend is a part of the group and seeks your help to identify the Secret 7 members. Can you help him out ???</p> <p>Input format: Input consists of an integer corresponding to the passcode entered by the member.</p> <p>Output format: The Output consists of the strings "Passcode matched. Hi Secret 7!!!" or “Sorry!!! passcode mismatched. Wrong identification.”. Refer sample input and output for formatting specifications. [All text in bold corresponds to input and the rest corresponds to output.]</p> <p>Sample Input and Output 1: Passcode: 1231</p>	<pre>import java.io.BufferedReader; import java.io.IOException; import java.io.InputStreamReader; public class Main { public static void main(String[] args) throws NumberFormatException, IOException { BufferedReader bf=new BufferedReader(new InputStreamReader(System.in)); System.out.println("Passcode:"); int m=Integer.parseInt(bf.readLine()); Integer [] ma=new Integer[4]; for (int i =3; i >=0; i--) { ma[i]=m%10; m=m/10; } } }</pre>

	<p>Sorry!!! passcode mismatched. Wrong identification.</p> <p>Sample Input and Output 2: Passcode: 1010 Passcode matched. Hi Secret 7!!!</p>	<pre> if(ma[0]==ma[2]&& ma[1]==ma[3]) { System.out.println("Passcode matched. Hi Secret 7!!!!"); }else { System.out.println("Sorry!!! passcode mismatched. Wrong identification."); } } }</pre>																
6	<p>GRADE</p> <p>Write a program to determine the grade of the student in a particular subject. Refer to the table given below for grade details.</p> <table><tr><th>Marks scored</th><th>Grade</th></tr><tr><td>100</td><td>S</td></tr><tr><td>[90,100)</td><td>A</td></tr><tr><td>[80,90)</td><td>B</td></tr><tr><td>[70,80)</td><td>C</td></tr><tr><td>[60,70)</td><td>D</td></tr><tr><td>[50,60)</td><td>E</td></tr><tr><td><50</td><td>F</td></tr></table> <p>The interval [a,b) includes all numbers greater than or equal to a and less than b.</p> <p>Input and Output Format:</p> <p>Input consists of a single integer that corresponds to the marks scored by the student.</p> <p>Print "Invalid Input" if it is not in the range 0 to 100.</p> <p>Refer sample input and output for formatting specifications.</p> <p>[All text in bold corresponds to input and the rest corresponds to output.]</p> <p>Sample Input and Output 1: Enter the marks 85 The student obtained a B grade</p> <p>Sample Input and Output 2: Enter the marks 850 Invalid Input</p>	Marks scored	Grade	100	S	[90,100)	A	[80,90)	B	[70,80)	C	[60,70)	D	[50,60)	E	<50	F	<pre>import java.util.Scanner; public class Main { public static void main(String[] args) { Scanner sc=new Scanner(System.in); System.out.println("Enter the marks"); double Marks=sc.nextDouble(); if(Marks==100) { System.out.println("The student obtained a S grade"); } else if(Marks<100&&Marks>=90) { System.out.println("The student obtained a A grade"); } else if(Marks<90&&Marks>=80) { System.out.println("The student obtained a B grade"); } else if(Marks<80&&Marks>=70) { System.out.println("The student obtained a C grade"); } else if(Marks<70&&Marks>=60) { System.out.println("The student obtained a D grade"); } else if(Marks<60&&Marks>=50) { System.out.println("The student obtained a E grade"); } else if(Marks<50&&Marks>=0) { System.out.println("The student obtained a F grade"); } else { System.out.println("Invalid Input"); } } }</pre>
Marks scored	Grade																	
100	S																	
[90,100)	A																	
[80,90)	B																	
[70,80)	C																	
[60,70)	D																	
[50,60)	E																	
<50	F																	

		}
7	<p style="text-align: center;">Pattern 1</p> <p>Write a program to print the given pattern.</p> <p>Input Format: Input consists of a single integer.</p> <p>Output Format: Refer sample outputs. There is a trailing space at the end of each line.</p> <p>Sample Input 1: 5</p> <p>Sample Output 1: 1 2 3 4 5 1 2 3 4 1 2 3 1 2 1</p> <p>Sample Input 2: 3</p> <p>Sample Output 2: 1 2 3 1 2 1</p>	<pre>import java.util.*; public class Main { public static void main(String[] args) { //fill your code here Scanner sc= new Scanner(System.in); // System.out.println("Num of rows"); int rows =sc.nextInt(); //System.out.println("pattern is"); //int n=5; for(int i=rows;i>=1;i--){ for(int j=1;j<=i;j++){ System.out.print(j+ " "); } System.out.println(); } } }</pre>
8	<p style="text-align: center;">Palindromic Prize</p> <p>A customer in the Personalised Gift Store is awarded a prize when their bill number is a 3-digit palindrome. Write a program for identifying the prize winners.</p> <p>Input Format: Input consists of a number that corresponds to the bill number.</p> <p>Output Format: The output consists of a string that is either 'yes' or 'no'. The output is 'yes' when the customer receives the prize and is 'no' otherwise.</p> <p>Sample Input 1: 565</p> <p>Sample Output 1: yes</p> <p>Sample Input 2: 568</p> <p>Sample Output 2: no</p> <p>Sample Input 3: 66</p> <p>Sample Output 3: no</p>	<pre>import java.util.Scanner; public class Main { public static void main(String[] args) { Scanner scan = new Scanner(System.in); int billNo = scan.nextInt(); if((billNo/100)==(billNo%10)) System.out.println("yes"); else System.out.println("no"); scan.close(); } }</pre>
9	<p>Sorted Prize</p> <p>A customer in the Personalised Gifts Store is awarded a prize when their bill number is a 3-digit number and all the 3 digits are in sorted order. (Examples ----> 379, 256, 973, 652, 225, 522 ...]</p>	<pre>import java.util.Scanner; public class Question9 { public static void main(String[] args) { Scanner sc = new Scanner(System.in);</pre>

	<div><div></div><p>Help Gita in identifying the prize winners. Input Format: Input consists of a number which corresponds to the bill number. Output Format: The output consists of a string that is either 'yes' or 'no'. The output is yes when the customer receives the prize and is no otherwise. Sample Input 1: 565 Sample Output 1: No Sample Input 2: 620 Sample Output 2: yes Sample Input 3: 66 Sample Output 3: no</p><div>Top of Form</div><div>Bottom of Form</div></div>	<pre>int m = sc.nextInt(); int arr[] = new int[3]; for(int i=0; i<3;i++) { arr[i]=m%10; m = m/10; } if(arr[0]>arr[1] && arr[1]>arr[2]) System.out.println("yes"); else if(arr[2]>arr[1] && arr[1]>arr[0]) System.out.println("yes"); else System.out.println("no"); }</pre>
10	<div><div>Series-II</div><p>Write a program to generate the below series: 4,32,128,256,n Input and Output Format: The first line is the input consists of a single integer that corresponds to n. The output consists of the series 4,32,128,.....n separated by a space. Sample Input 1: 4 Sample Output 1: 4 32 128 256 Sample Input 2: 2 Sample Output 2: 4 32 Sample Input 3: 6 Sample Output 3: 4 32 128 256 256 0</p></div>	<pre>import java.util.Scanner; public class Main { public static void main(String[] args) { Scanner sc=new Scanner(System.in); int m=4; int multiple=8; int n=sc.nextInt(); for(int i=0;i<n;i++) {System.out.print(m+" "); m=m*multiple; multiple=multiple/2; } } }</pre>

11	<div>Alphabet Pattern 1</div> <div>Write a program to print the given pattern.</div> <div>Input and Output Format: Input consists of a single integer that corresponds to the number of rows,n. The output is the alphabet pattern for the given input,n.</div> <div>Sample Input 1: 5 Sample Output 1: A AB ABC ABCD ABCDE</div> <div>Sample Input 2: 7 Sample Output 2: A AB ABC ABCD ABCDE ABCDEF ABCDEFG</div>	<div>import java.util.*; public class Main { public static void main(String[] args) { int i,j; Scanner sc = new Scanner(System.in); int n=sc.nextInt(); for(i=1;i<=n;i++) { for(j=1;j<=i;j++) { System.out.print((char)(j+64)); } System.out.println(""); } } }</div>
12	<div>COUNTING</div> <div>Write a program to count the vowels, consonants, digits, and white spaces in a string.</div> <div>Input and Output Format : Input consists of a string. Assume the maximum length of the string is 200. The characters in the string can contain both uppercase and lowercase. Refer sample input and output for formatting specifications.</div> <div>[All text in bold corresponds to the input and the rest corresponds to output.]</div> <div>Sample Input and Output 1 : Enter a line of string This program is very easy 2 complete Vowels: 10 Consonants: 19 Digits: 1 White spaces: 6</div> <div>Sample Input and Output 2 : Enter a line of string</div>	

	WelcomE Vowels: 3 Consonants: 4 Digits: 0 White spaces: 0	
13	<p style="text-align: center;">Prime</p> <p>Write a program to find whether a given number is prime or not.</p> <p>Input Format: Input consists of a single integer.</p> <p>Output Format: The output should display whether the input is “Prime” or “Not prime”. Refer sample input and output for formatting specifications.</p> <p>Sample Input 1: 13 Sample Output1: Prime</p> <p>Sample Input 2: 33 Sample Output2: Not prime</p>	
14	<p style="text-align: center;">P1 - Armstrong Number</p> <p>An Armstrong number of three digits is an integer such that the sum of the cubes of its digits is equal to the number itself. For example, 371 is an Armstrong number since $3^3 + 7^3 + 1^3 = 371$. Write a program to find whether a given 3-digit number is an Armstrong number or not.</p> <p>Input Format: Input consists of a single integer.</p> <p>Output Format: Refer sample output for details.</p> <p>Sample Input 1: 153 Sample Output 1: Armstrong Number</p> <p>Sample Input 2: 101 Sample Output 2: Not An Armstrong Number</p>	<pre>import java.util.*; public class Main { public static void main(String[] args) { Scanner s = new Scanner(System.in); int n = s.nextInt(); int c=0,a,temp; temp = n; while (n>0) {a = n%10; n = n/10; c = c + (a*a*a); } if (temp == c) System.out.println("Armstrong Number"); else System.out.println("Not An Armstrong Number"); } }</pre>
15	Lucky Customer Award	import java.util.Scanner;

	<p>Every day few of the customers are given a lucky gift. Lucky gift is given to a customer when his / her bill number ends with the last digit of that day number or when the bill number is a multiple of the day number.Can you help Gita in deciding whether a customer gets the lucky gift or not?</p> <p>Input Format: Input consists of 2 integers that correspond to the day number in today's date and the bill number.</p> <p>Output Format: Output is either 'yes' or 'no'. Output is yes when the customer gets the lucky gift and is no otherwise.</p> <p>Sample Input 1: 5 45 Sample Output 1: yes</p> <p>Sample Input 2: 14 34 Sample Output 2: yes</p> <p>Sample Input 3: 5 44 Sample Output 3: no</p>	<pre>public class Main { public static void main(String[] args) { // TODO Auto-generated method stub Scanner sc=new Scanner(System.in); int date=sc.nextInt(); int billno=sc.nextInt(); int r=billno%10; int dr=date%10; if(r==dr billno%date==0) { System.out.println("yes"); } else { System.out.println("no"); } } }</pre>
16	<p style="text-align: center;">Day 11 Criteria</p> <p>Write a program to generate the below series: 24,60,120,210,...</p> <p>Input Format: Input consists of a single integer that corresponds to n.</p> <p>Output Format: The output consists of the terms in the series separated by a blank space.</p> <p>Sample Input 1: 5 Sample Output 1: 24 60 120 210 336</p> <p>Sample Input 2: 10 Sample Output 2: 24 60 120 210 336 504 720 990 1320 1716</p>	<pre>import java.util.*; public class Main { public static void main(String[] args) { Scanner sc=new Scanner(System.in); int n=sc.nextInt(); for(int i=2;i<=n+1;i++) { int j=i+1; int k=i+2; System.out.print(i*j*k+ " "); j=0; k=0; } } }</pre>

		}
17	<p style="text-align: center;">P3 – Number series</p> <p>Write a program to print the series ---- 1,3,6,10,15 upto ‘n’ terms.</p> <p>Input Format: Input consists of a single integer.</p> <p>Output Format: Refer sample output for details.</p> <p>Sample Input: 6</p> <p>Sample Output: 1 3 6 10 15 21</p>	<pre>import java.util.Scanner; public class Main { public static void main(String[] args) { Scanner sc = new Scanner(System.in); int terms=sc.nextInt(); int n=1; int m=2; System.out.print(n+" "); for(int i=1;i<terms;i++) { n=n+m; System.out.print(n+" "); m++; } //Fill your code here } }</pre>
18	<p style="text-align: center;">Alphabet Pattern 9</p> <p>Write a program to print the given pattern.</p> <p>Input Format: Input consists of a single integer which corresponds to the number of rows..</p> <p>Output Format: Refer sample output.</p> <p>Sample Input: 5</p> <p>Sample Output: A BB CCC DDDD EEEE</p>	<pre>import java.util.Scanner; public class Main { public static void main(String[] args) { Scanner scan=new Scanner(System.in); char c = 'A'; int rows =scan.nextInt(); for (int i = 0; i< rows; i++) { for (int j = 0; j <= i; j++) { System.out.print((char)(c+i)); } System.out.println(); } scan.close(); } }</pre>
19		
20		

