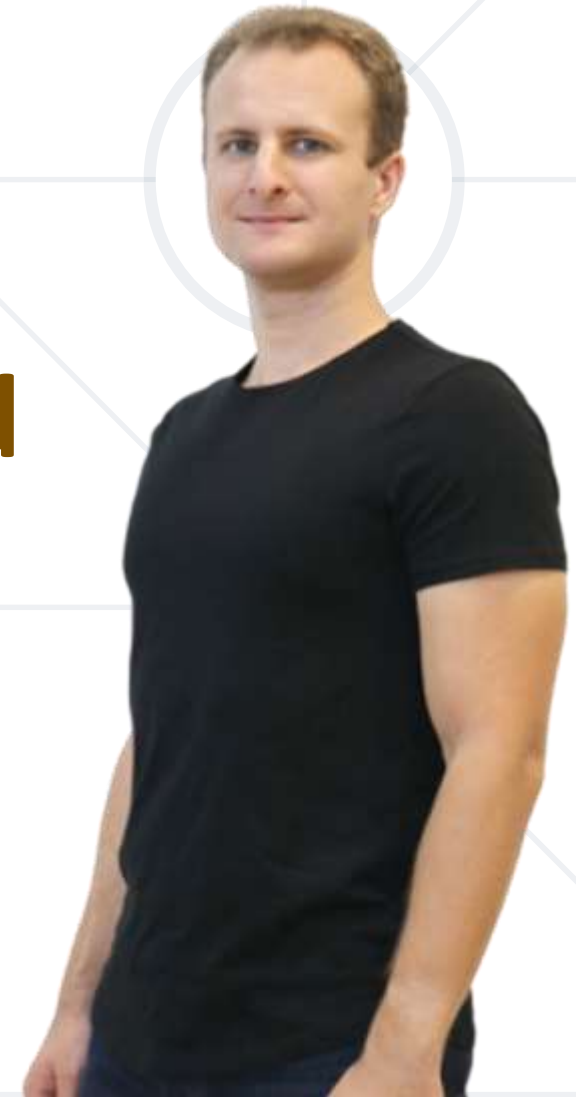


Java Foundations

Exercises for:
Basic Syntax, I/O,
Conditions, Loops and
Debugging



Problem: Student Information

- You will be given 3 input lines:
 - Student **name**, **age** and **average grade**
- Print the input in the following format:
 - **"Name: {name}, Age: {age}, Grade {grade}"**
 - Format the grade to 2 decimal places

John
15
5.40



Name: John, Age: 15, Grade: 5.40

Problem: I Will be Back in 30 Minutes

- Write a program that reads **hours** and **minutes** from the console and calculates the **time after 30 minutes**
 - The hours and the minutes come on separate lines
- Example:

1
46 → 2:16

0
01 → 0:31

23
59 → 0:29

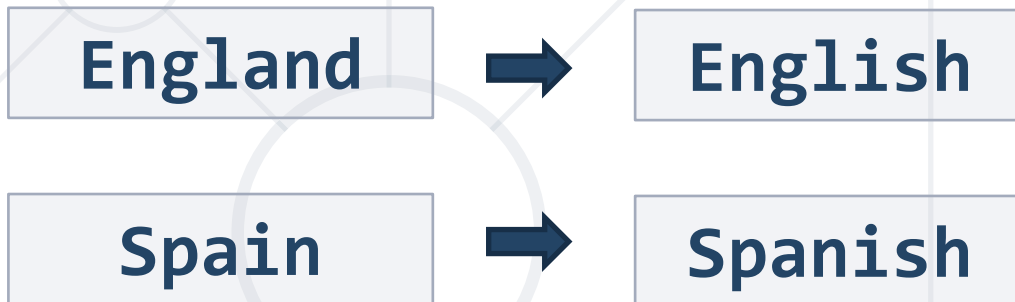
11
08 → 11:38

12
49 → 13:19

11
32 → 12:02

Problem: Foreign Languages

- By given country print its typical language:
 - English -> England, USA
 - Spanish -> Spain, Argentina, Mexico
 - other -> unknown



Problem: Theatre Promotions

- A theatre has the following ticket prices according to the age of the visitor and the type of day. If the age is < 0 or > 122 , print "Error!":

Day / Age	$0 \leq \text{age} \leq 18$	$18 < \text{age} \leq 64$	$64 < \text{age} \leq 122$
Weekday	12\$	18\$	12\$
Weekend	15\$	20\$	15\$
Holiday	5\$	12\$	10\$

Weekday
42



18\$

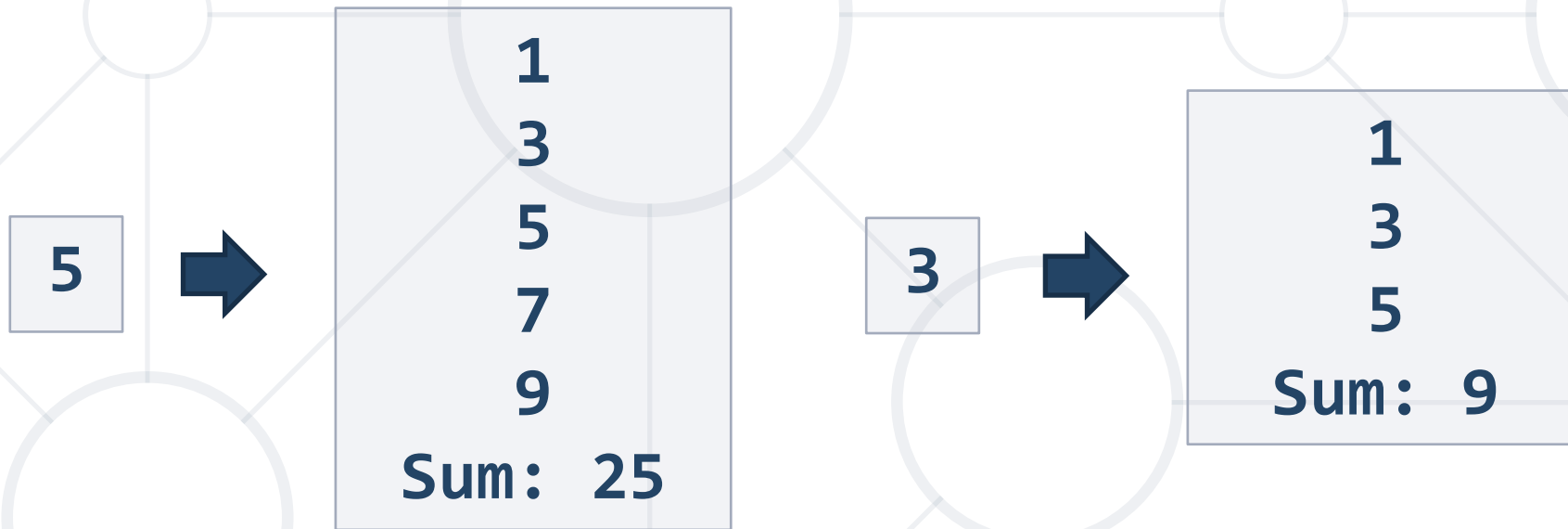
Holiday
-12



Error!

Problem: Sum of Odd Numbers

- Write a program to print the first **n** odd numbers and their sum



Problem: Multiplication Table

- Print a table holding $\text{number} * 1$, $\text{number} * 2$, ..., $\text{number} * 10$

```
int number = Integer.parseInt(sc.nextLine());
int times = 1;
while (times <= 10) {
    System.out.printf("%d X %d = %d%n",
        number, times, number * times);
    times++;
}
```

Problem: Multiplication Table 2.0

- Upgrade your program and take the initial times from the console

```
int number = Integer.parseInt(sc.nextLine());
int times = Integer.parseInt(sc.nextLine());
do {
    System.out.printf("%d X %d = %d%n",
        number, times, number * times);
    times++;
} while (times <= 10);
```


Problem: Find and Fix the Bugs in the Code



- A program aims to print the first **n** odd numbers and their sum

```
Scanner sc = new Scanner(System.in);
int n = Integer.parseInt(sc.nextLine());
int sum = 1;
for (int i = 0; i <= n; i++) {
    System.out.print(2 * i + 1);
    sum += 2 * i;
}
System.out.printf("Sum: %d%n", sum);
```

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