Operators and Conditionals

With Sanket Singh

Let’s crack Competitive Programming together!

Sanket Singh

- Software Development Engineer @ **LinkedIn**
- Former Software Developer @ **Interviewbit/Scaler**
- Former Product Engineer @ **Coding Blocks**
- Cracked **Google** Summer Of Code 2019 under **Harvard University**
- Offers From **Linkedin, Sprinklr, Dunzo, Works Application(Singapore), Interviewbit, Grofers, Splash Learn**
- **No. 1** Educator in Unacademy Competitive Programming Track
- Former Research Intern @ **ISRO (Indian Space Research Organisation)**
- Taught 7,500+ programmers in Data Structures, Algorithms and Fundamentals of Computer Science
- Got **Rank 1** in Codechef Long Challenges
- Won **Infosys** Digital Make-a-thon

1. Which of the following is a correct variable name?

A. if&y
B. 3class
C. xyx
D. &else

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B. 3class
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D. &else

variable name must start with an alphabetic character or an underscore. No special character can be used in a variable name.

2.How many conditional boxes are needed to check whether any condition is true or false?

A. 0
B. 1
C. 2
D. 3

2.How many conditional boxes are needed to check whether any condition is true or false?

A. 0
B. 1
C. 2
D. 3

One conditional box is used to check any condition which give true or false

3. Which of the following will return true?

A. ! (false or (true and true))
B. ! (false or true and true)
C. ! (false or false and true)
D. ! (false or true or false)

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A. ! (false or (true and true))
B. ! (false or true and true)
C. ! (false or false and true)
D. ! (false or true or false)

Since not (!) is present outside the parentheses, we have to find the expression which returns false.

4. Let x be a number which is divisible by a and b both. Then which of the following will return true?
Note: (a%b != 0, b%a != 0, a != 0, b != 0)

A. x%a == 0 and x%b == 0
B. x%a != 0 and x%b != 0
C. x%a == 0 and x%b != 0
D. x%a != 0 and x%b == 0

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A. x%a == 0 and x%b == 0
B. x%a != 0 and x%b != 0
C. x%a == 0 and x%b != 0
D. x%a != 0 and x%b == 0

AND returns true only if both the conditions are true.

5. Let x be any given number. Which of the following will return true if x is either divisible by a or b?
Note: (a%b != 0, b%a != 0, a != 0, b != 0)

A. x%a == 0 or x%b == 0
B. x%a != 0 or x%b != 0
C. x%a == 0 or x%b != 0
D. x%a != 0 or x%b == 0

5. Let x be any given number. Which of the following will always return true whenever x is either divisible by a or b?
Note: x, a, b > 0

A. x%a == 0 or x%b == 0
B. x%a != 0 or x%b != 0
C. x%a == 0 or x%b != 0
D. x%a != 0 or x%b == 0

OR returns true when any of the conditions true.

6. Let x be any given number. Which of the following will always return true whenever x is either divisible by a or b?
Note: x, a, b > 0
(same as Q5, but different options)

A. ! (x%a == 0 or x%b == 0)
B. ! (x%a != 0 and x%b != 0)
C. ! (x%a == 0 and x%b != 0)
D. ! (x%a != 0 and x%b == 0)

6. Given a number x, which of the following will return true if x is either divisible by a or b?
Note: (a%b != 0, b%a != 0, a != 0, b != 0)

A. ! (x%a == 0 or x%b == 0)
B. ! (x%a != 0 and x%b != 0)
C. ! (x%a == 0 and x%b != 0)
D. ! (x%a != 0 and x%b == 0)

7. What will be the output of the statement
2*3**2

A. 18
B. 72
C. 36
D. 12

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We first evaluate power and then product.

8. Let a and b be two integer numbers. If values of a*b and a are known, then will you always be able to find the value of b?

A. True
B. False

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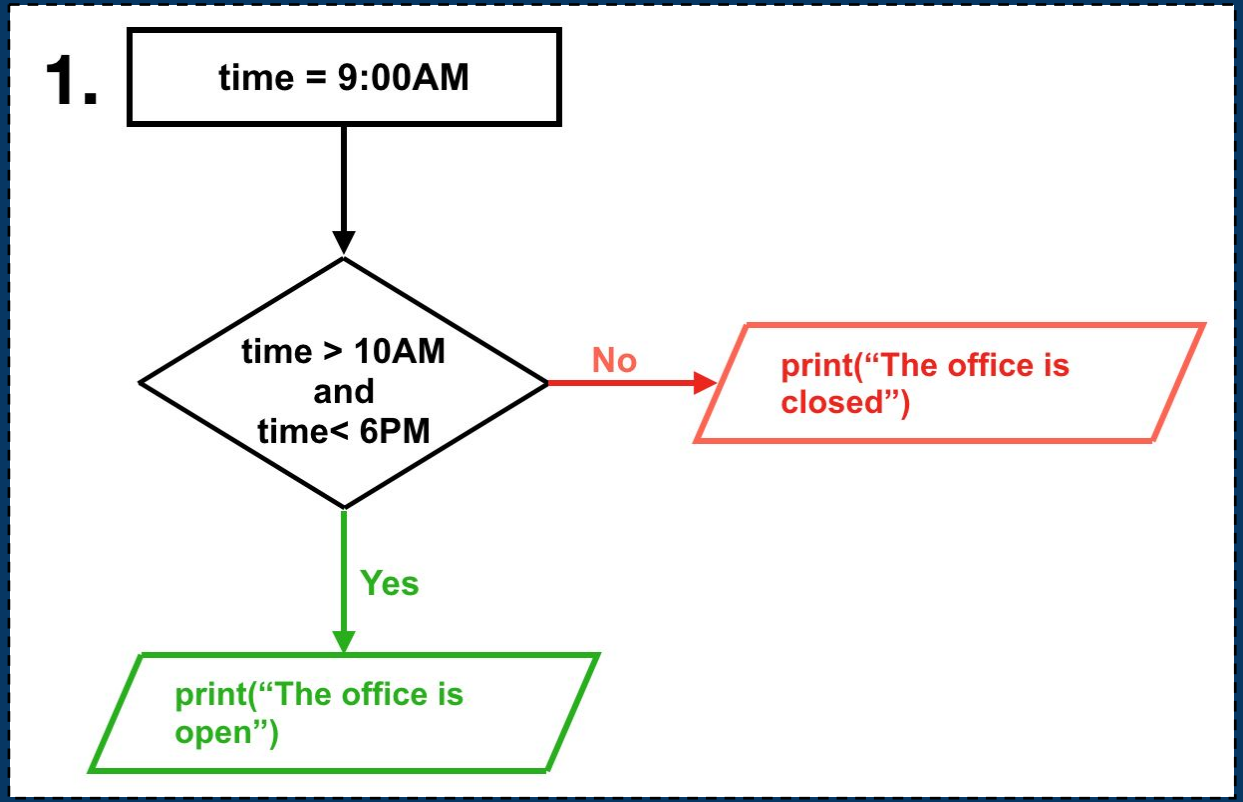
A. True
B. False

Think for a = 0 it is not true.

9. The output of the following flowchart will be “The office is closed.”

True or False?



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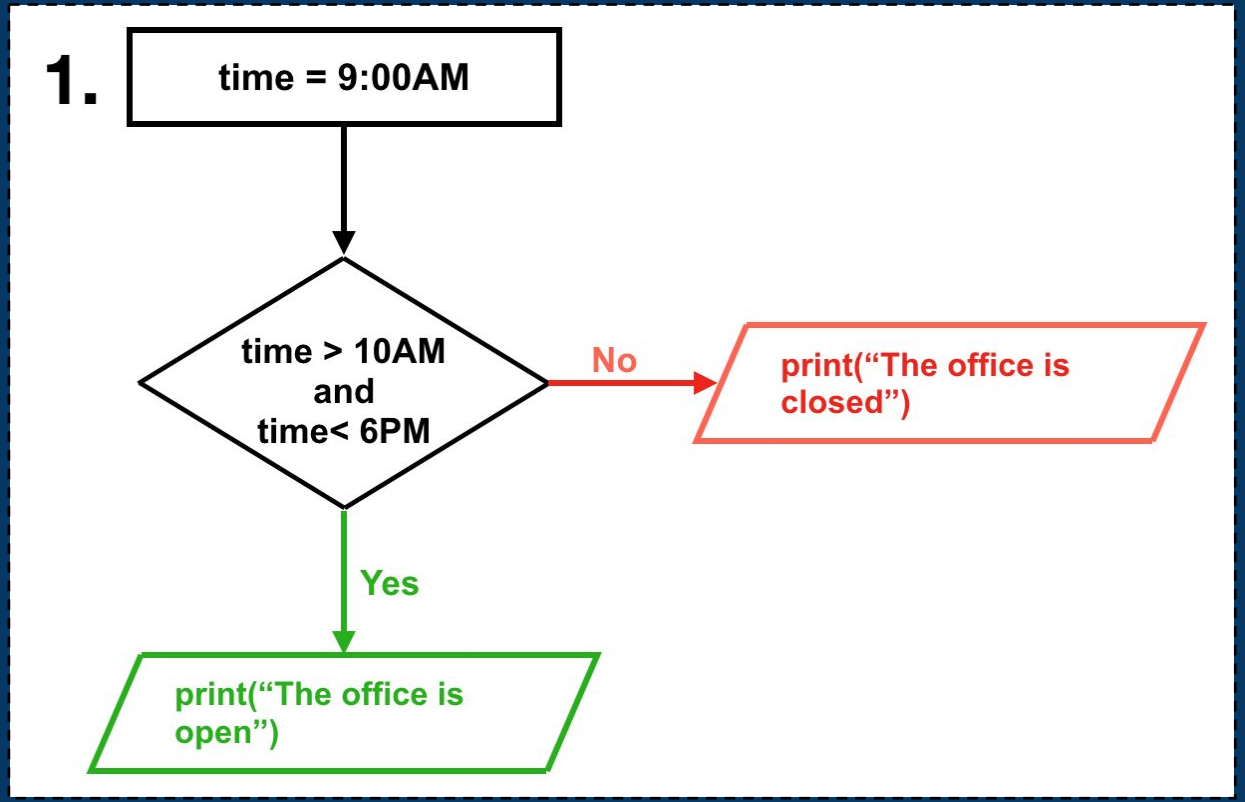
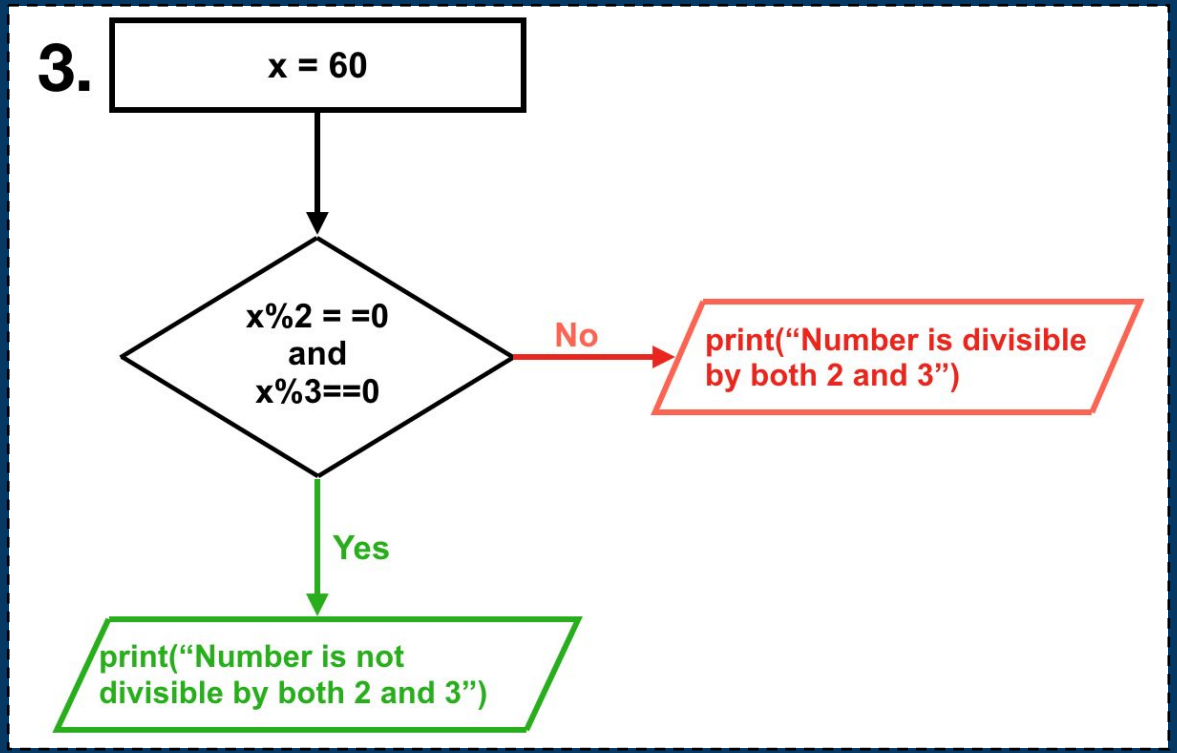


10. The given flowchart uses the correct logic to find if x is divisible by 6.

True or False?



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True or False?