EE1001
Foundations of Digital Techniques

Logic

Assignment #3

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Please submit assignment #3 on or before 10 November 2020, 23:59

- Q1)
- A = {4, 14, 66, 70}, x ∈ A such that x is an odd number. Determine whether the statement is T or F.

- Q2)
- A = {1, 2, 3}, p: $\forall x \in A, x < 4$. Determine whether the statement is T or F.
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- Q3)
- Write the negations of following statements.
- i. $\forall\, n \in N,\ n + 1 > 2$.
- ii. $\forall\, x \in N,\ x\ 2 + x$ is even number.

Tutorial 1 Supplementary Question S2

Q4. There are two types of phones:

Always gives real messages	Always gives fake messages
	
Ordinary phone	Hijacked phone

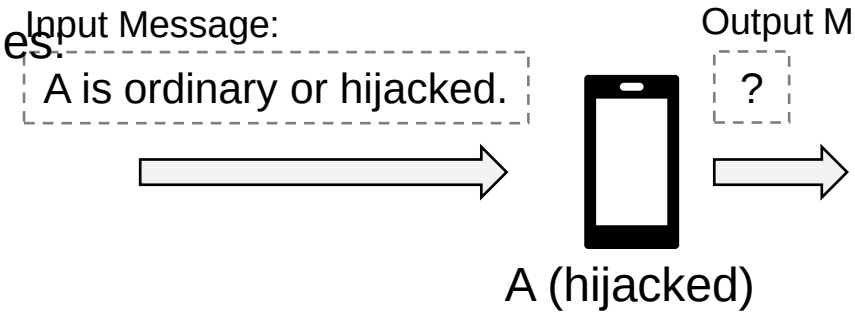
The Message given by A:

Question:
Is A ordinary or hijacked? Use truth table to justify.

Tutorial 1 Supplementary Question S3

Q5. There are two types of phones:

Always gives real messages	Always gives fake messages
	
Ordinary phone	Hijacked phone



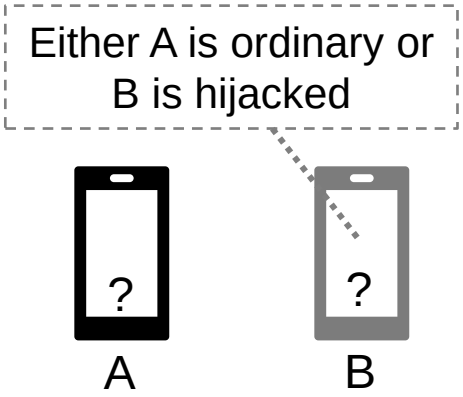
Question:
A is a hijacked phone, and my input message is "A is ordinary or hijacked".
What message will A output?

Tutorial 1 Supplementary Question S4

Q6. There are two types of phones:

Always gives real messages	Always gives fake messages
	
Ordinary phone	Hijacked phone

The Message given by B:



Question:

Are A and B ordinary or hijacked? Use truth table to justify.

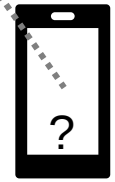
Tutorial 1 Supplementary Question S5

Q7. There are two types of phones:

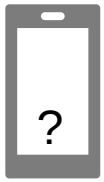
Always gives real messages	Always gives fake messages
	
Ordinary phone	Hijacked phone

The Message given by A:

> Either A is hijacked or B is ordinary



A



B

Question:

Are A and B ordinary or hijacked? Use truth table to justify.

- END -