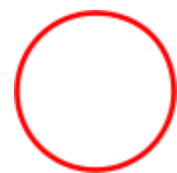


STEP 1 - RETENTION

Below there is a list of figures and, for each figure, a table with two definition options.
Please sign with an “x” the right definition for each figure.



Attack Node	<input type="checkbox"/>	Defense Node	<input type="checkbox"/>
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Attack Node	<input type="checkbox"/>	Defense Node	<input type="checkbox"/>
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Disjunctive Refinement	<input type="checkbox"/>	Conjunctive Refinement	<input type="checkbox"/>
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Disjunctive Refinement	<input type="checkbox"/>	Conjunctive Refinement	<input type="checkbox"/>
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Countermeasure	<input type="checkbox"/>	Refinement	<input type="checkbox"/>
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STEP 2 - UNDERSTANDABILITY (NOT IN CONTEXT)

We present 6 items, for each of them we show one or more attack-defense tree fragments and 4 statements. You have to check for each of the statements whether it is true or false.

Please write down starting and finishing times in the appropriate lines.

WRITE DOWN STARTING TIME (HH: MM) _____

1.

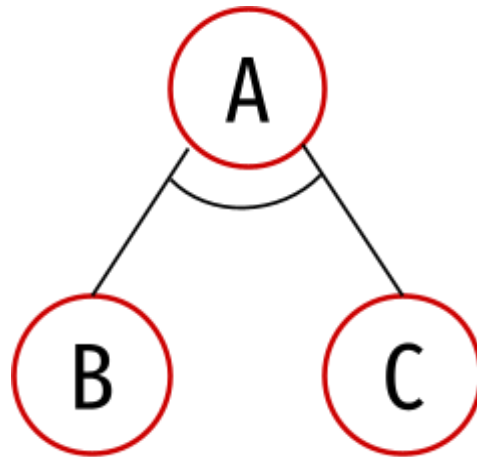


Figure 1

Check the following statements concerning Figure 1 and mark your answer with an “x” in the corresponding (true or false) cell.	TRUE	FALSE
To accomplish goal A, action B has to be performed <i>before</i> action C.		
To accomplish goal A, action C has <i>not</i> to be performed if action B has been performed.		
Actions B and C are disjunctive refinements.		
To accomplish goal A, both actions B and C must be performed.		

2.

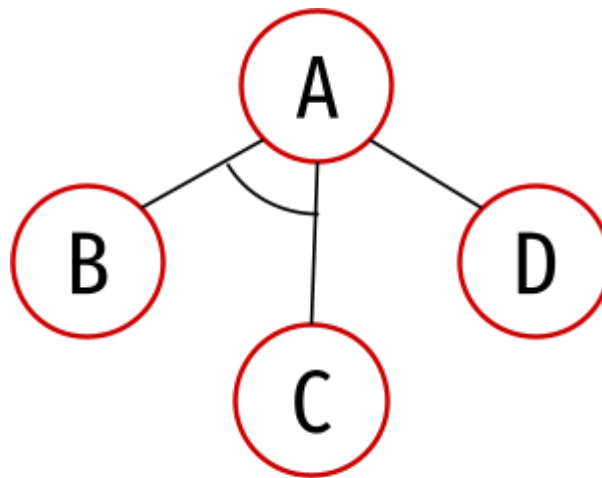


Figure 2

Check the following statements concerning Figure 2 and mark your answer with an “x” in the corresponding (true or false) cell.	TRUE	FALSE
To accomplish goal A, actions B, C and D must be performed consecutively.		
To accomplish goal A, the order in which actions B and C are performed is not significant, while performing only one of them would not suffice.		
Actions B and C are refinements of goal A, while action D is not.		
To accomplish goal A, action D must be performed only if neither actions B nor C are performed.		

3.

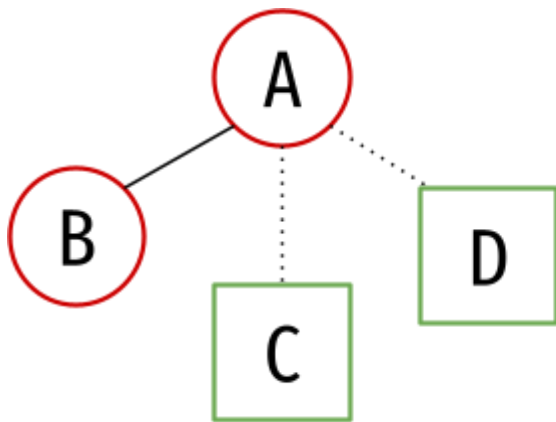


Figure 3a

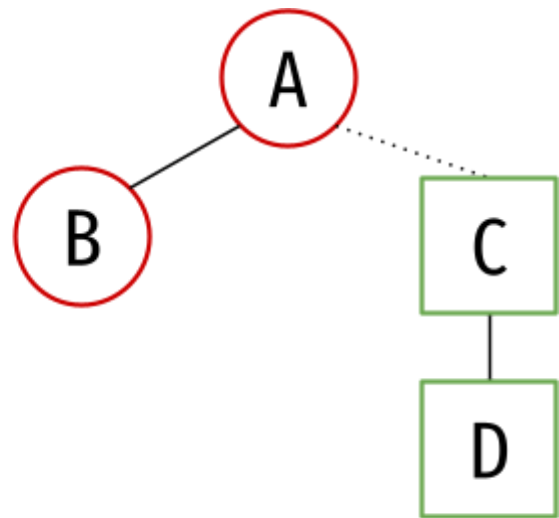


Figure 3b

Check the following statements concerning Figure 3a and Figure 3b and mark your answer with an “x” in the corresponding (true or false) cell.	TRUE	FALSE
Figure 3a is syntactically correct (i.e., constructed correctly).		
Figure 3b is syntactically correct (i.e., constructed correctly).		
In Figure 3b, action D is a refinement of action C.		
The execution of action B necessarily leads to the accomplishment of goal A (in both Figures 3a and 3b).		

4.

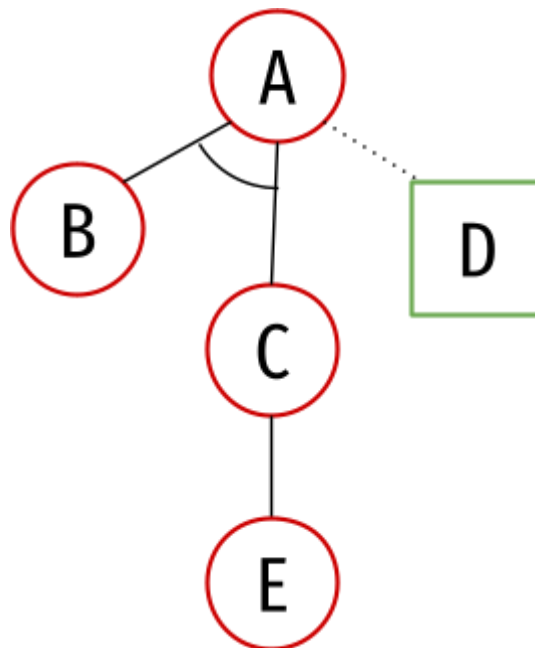


Figure 4

Check the following statements concerning Figure 4 and mark your answer with an “x” in the corresponding (true or false) cell.	TRUE	FALSE
To accomplish goal A, action E has to be performed <i>before</i> action B.		
Action E is a refinement of goal A.		
The execution of action E contributes to the accomplishment of goal A.		
The execution of action D puts an end to the attack.		

5.

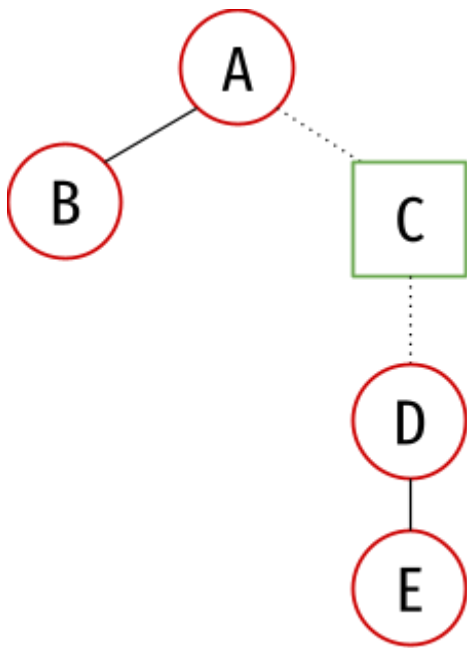


Figure 5a

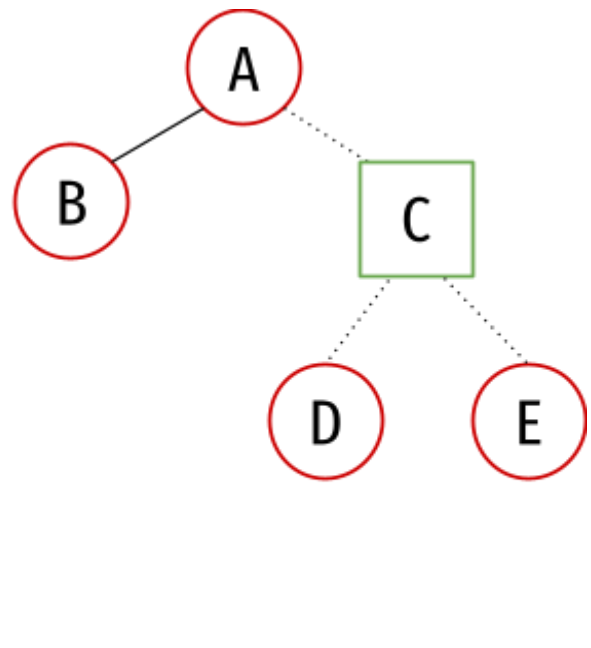


Figure 5b

Check the following statements concerning Figure 5a and Figure 5b and mark your answer with an "x" in the corresponding (true or false) cell.	TRUE	FALSE
Figure 5b is not syntactically correct (i.e., constructed incorrectly).		
In Figure 5a, to accomplish goal A, both actions B and E have to be performed.		
In Figure 5a, the execution of action C puts an end to the attack.		
In Figure 5a, action E is a refinement of the counterattack D.		

6.

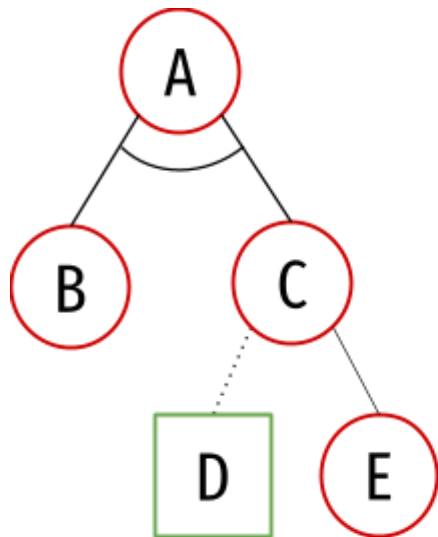


Figure 6a

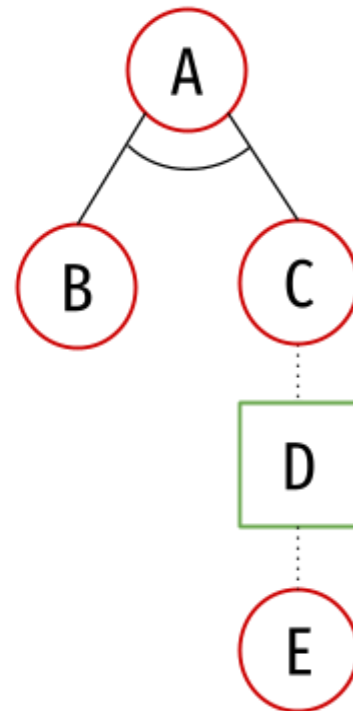


Figure 6b

Check the following statements concerning Figure6a and Figure 6b and mark your answer with an "x" in the corresponding (true or false) cell.	TRUE	FALSE
In Figure 6a, action E is a prerequisite of goal A.		
In Figure 6a, action D is a countermeasure of sub-goal C and action E is its refinement.		
Only one among actions B and C have to be performed to achieve goal A (in both Figures 6a and 6b).		
It is enough to perform action B to reach goal A (in both Figures 6a and 6b).		

WRITE DOWN FINISHING TIME (HH: MM) _____

STEP 3 - TRANSFER

We show 3 attack-defense tree fragments and, for each of them, a list of 3 requests.

You have to modify the tree according to the requests.

To modify the tree please double-click on the figure, or click on the figure and then click the button "modify". Next to each figure, there are instructions to modify it.

Please write down starting and finishing times in the appropriate lines for each tree.

1. WRITE DOWN STARTING TIME (HH: MM) _____

Figure 7 shows a fragment of the attack-defense tree which models an attack to a bank account.

To add one of the following elements, please click on it and press on the keyboard ctrl-d (on Windows and Linux) or cmd-d (on macOS). This action will produce a new element. Move the new element to the desired position and edit it according to the request.
Note that an edge (both full and dotted) can be positioned by clicking on it and moving its vertices in the desired position.
To add the text on a node (both attack and defence) click inside it and edit the text.

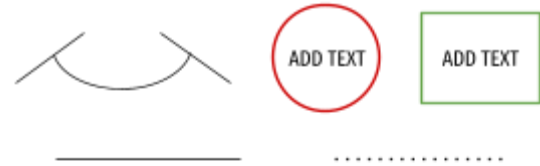
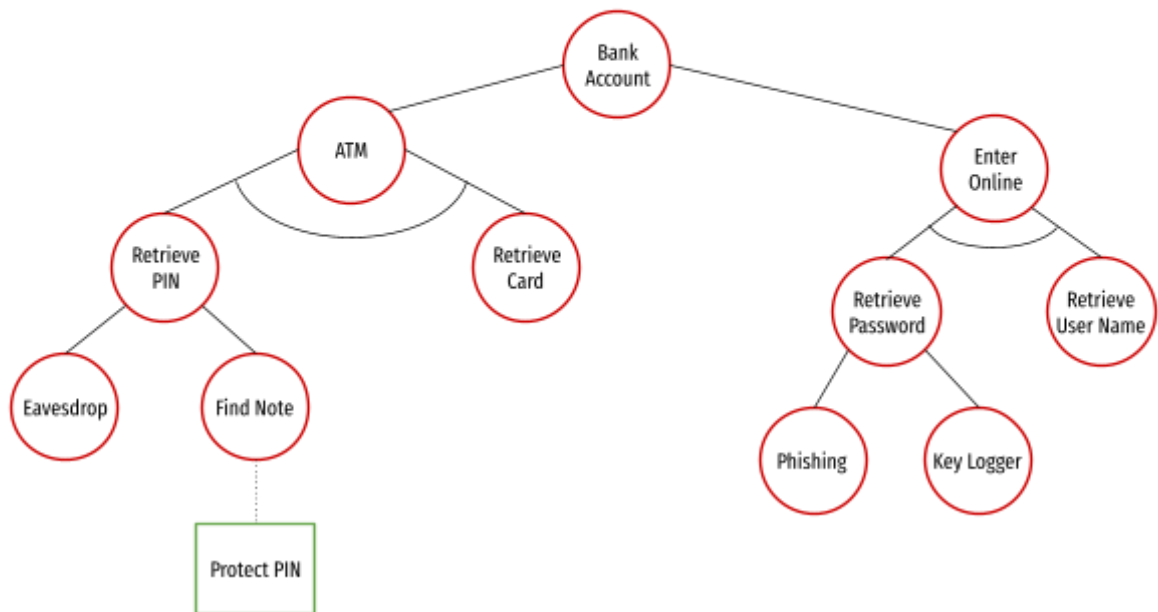


Figure 7



Add to the fragment the nodes corresponding to the following 3 attacks/defenses:

1. Refine “Retrieve Card” with the attacks “Clone the Card” and “Steal the Card”
2. Add to the tree the countermeasures “Memorise PIN” and “Use a digital keychain to store PIN”
3. Add to the tree one or more nodes corresponding to the following situation “The attacker intimidates the user to obtain the user name and the password for the online channel”

WRITE DOWN FINISHING TIME (HH: MM) _____

2. WRITE DOWN STARTING TIME (HH: MM) _____

Figure 8 shows a fragment of the attack-defense tree which models an attack to open a safe lock.

To add one of the following elements, please click on it and press on the keyboard ctrl-d (on Windows and Linux) or cmd-d (on macOS). This action will produce a new element. Move the new element to the desired position and edit it according to the request.
Note that an edge (both full and dotted) can be positioned by clicking on it and moving its vertices in the desired position.
To add the text on a node (both attack and defence) click inside it and edit the text.

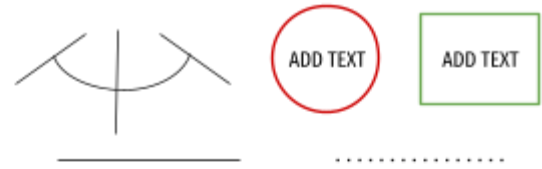
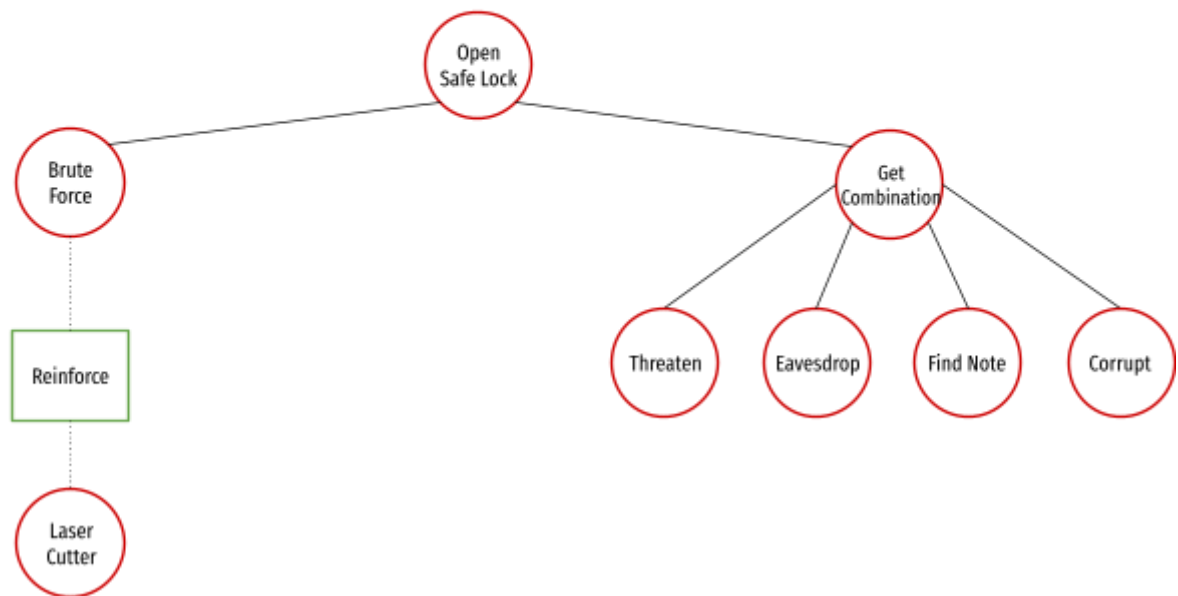


Figure 8



Add to the fragment the nodes corresponding to the following 3 attacks/defenses:

1. Add to the node “Reinforce” its conjunctive refinements for the actions “Hide the safe lock”, “Place the safe lock on a corner”, and “Place the safe lock high up”
2. Add to the tree the attack “Install wrongly the safe lock” (the attacker pretends to be the installer so that the attacker can later open the lock)
3. Refine the node “Get combination” into two different methods: one to get it by the target *directly*, and one to get it *indirectly*. Then adjust its existing child nodes accordingly.

WRITE DOWN FINISHING TIME (HH: MM) _____

3. WRITE DOWN STARTING TIME (HH: MM) _____

Figure 9 shows a fragment of the attack-defense tree which models an attack to burgle a house.

To add one of the following elements, please click on it and press on the keyboard ctrl-d (on Windows and Linux) or cmd-d (on macOS). This action will produce a new element. Move the new element to the desired position and edit it according to the request.
Note that an edge (both full and dotted) can be positioned by clicking on it and moving its vertices in the desired position.
To add the text on a node (both attack and defence) click inside it and edit the text.

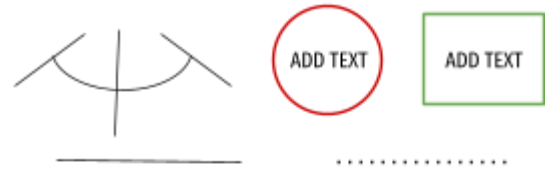
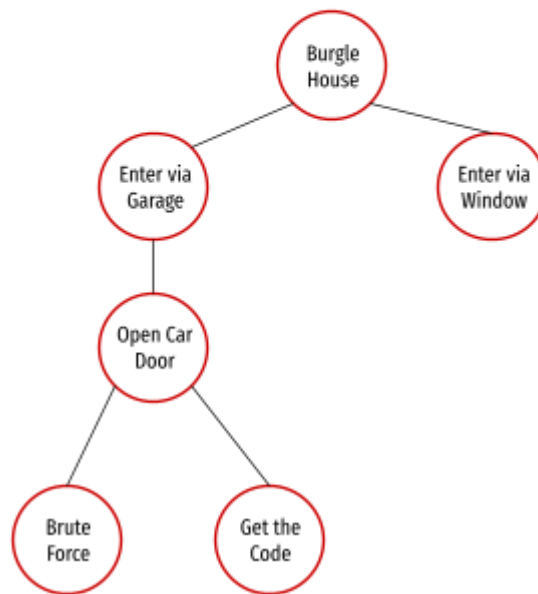


Figure 9



Add to the fragment the nodes corresponding to the following 3 attacks/defenses:

1. Add to the node “Enter via Window” its refinements for the actions “Break Glass” and “Cut Glass”.
2. Add a countermeasure that models the use of an alarm in the car door.
3. Add to the tree a branch to model an attack through a passage with 2 levels of refinement.

WRITE DOWN FINISHING TIME (HH: MM) _____

STEP 4 - UNDERSTANDABILITY IN CONTEXT

We show 3 attack-defense tree fragments and, for each of them, a list of 3 questions.

You have to answer the questions with yes or no.

To answer the question, please click at the end of the question and type yes or no.

Please write down starting and finishing times in the appropriate lines for each tree.

1. WRITE DOWN STARTING TIME (HH: MM) _____

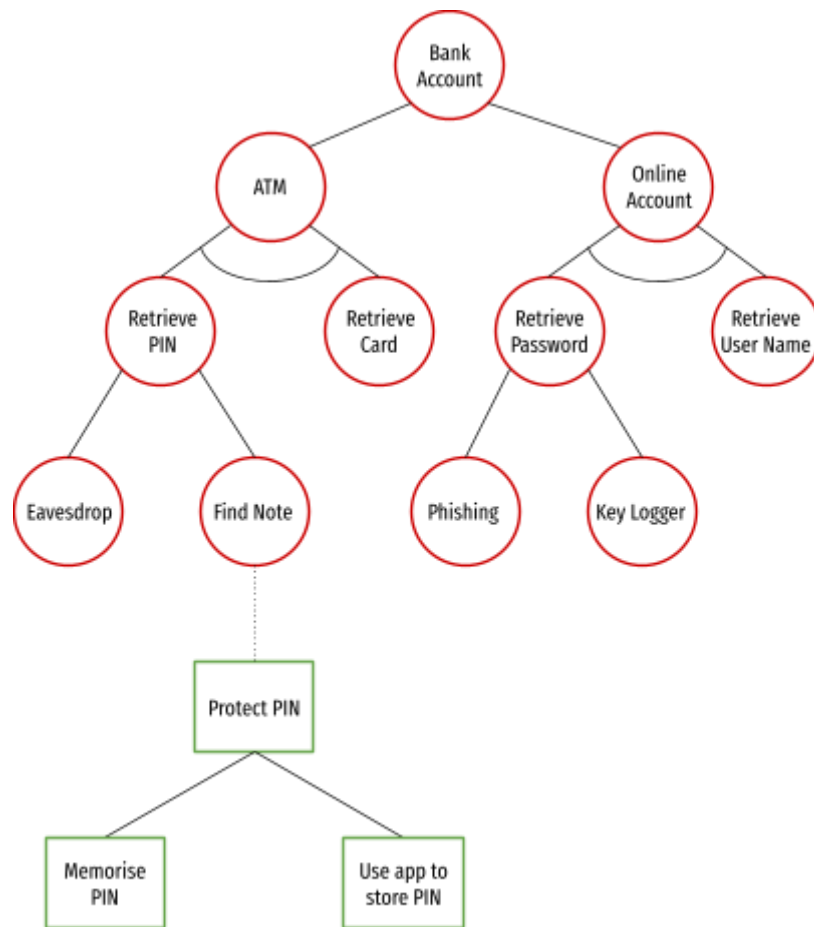


Figure 10

Answer the following Yes/No questions concerning Figure 10:

1. Is there a countermeasure node with its own two refinements?
2. A defender protects the PIN by both memorizing the PIN and using an application to store it, doesn't he/she?
3. Is it possible to violate the online account by only using phishing?

WRITE DOWN FINISHING TIME (HH: MM) _____

2. WRITE DOWN STARTING TIME (HH: MM) _____

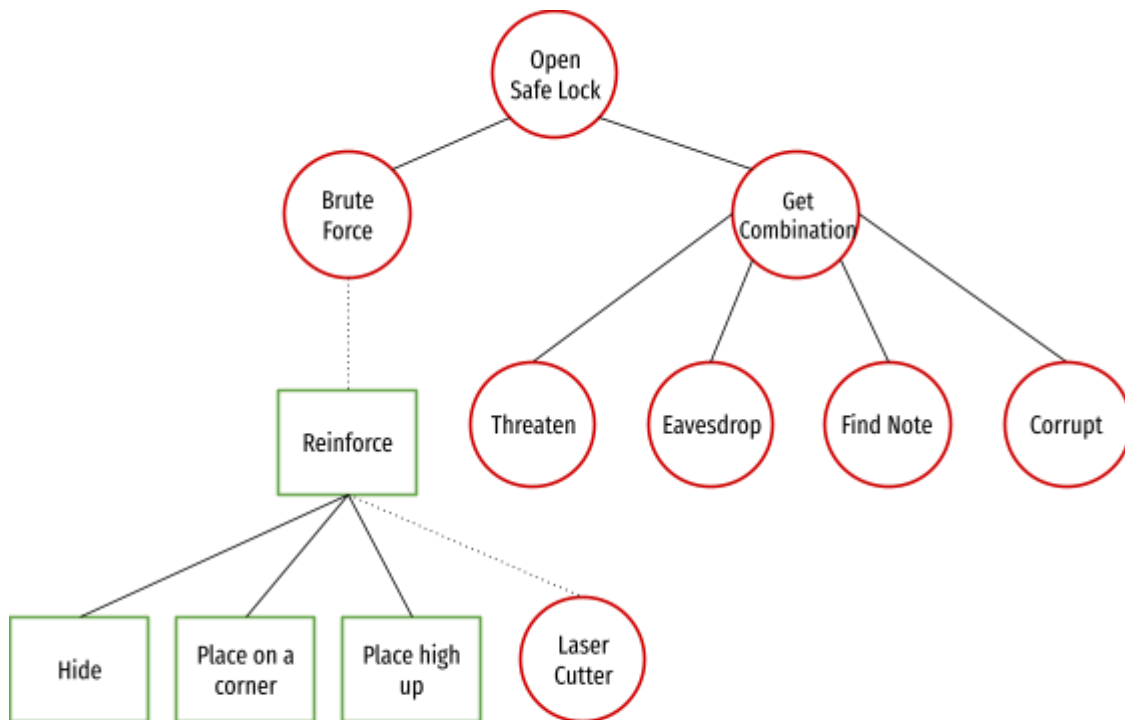


Figure 11

Answer the following Yes/No questions concerning Figure 11:

1. Is it possible to get the combination of the safe lock only by finding a note?
2. Even if the safe lock has been reinforced, is it possible to open it with a laser cutter?
3. Is there a path to open the safe lock without opposition?

WRITE DOWN FINISHING TIME (HH: MM) _____

3. WRITE DOWN STARTING TIME (HH: MM) _____

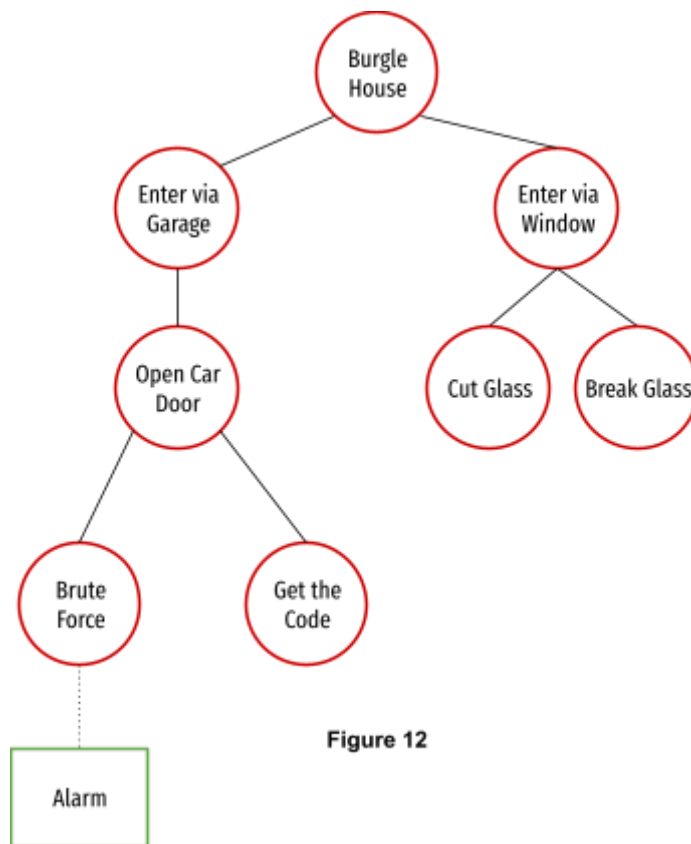


Figure 12

Answer the following Yes/No questions concerning Figure 12:

1. Is it possible to open the car door with no countermeasure?
2. To enter the house via the window, is it necessary to both cut the window glass and break the window glass?
3. The alarm stops the burglar from forcing the car door but not from opening it with the door code, doesn't it?

WRITE DOWN FINISHING TIME (HH: MM) _____