

Game – Doggy

Situation:

A dog is guarding a chest filled with gold, which is placed close to the border fence. Several people are walking by the fence.

3 kinds of people exists at the moment:

Child

Children are harmless.

They never steal any money but occasionally they play with the dog, what costs extra energy and can distract it.

It is also possible that they give the dog some food or water.



Teenager

Teenager are not very dangerous.

They can steal money but if they do, it is a spontaneous decision and they steal a lower amount of money.

Teenager sometimes act like children and play with the dog as well but more intense. It costs more energy than with children.



Thief

Thieves are dangerous.

Their only purpose is to steal money and if they do, they take a large amount of money.

Thieves are able to steal more than once when they reached the fence but only once per round.



Task:

Write a script for the dog, so that he is able to guard the chest as long as possible.

Open the *02_Doggy_function.js* and write your code in the *DoggyRound()*-function, in which you can determine the activity of the dog, which he will perform at the end of the round.

| 02_Doggy_function.js | |
|----------------------|--|
| 1 | /** |
| 2 | * you can determine the activity of the dog, which he will |
| 3 | * perform at the end of the round |
| 4 | * @param {integer} round - the current round |
| 5 | * @param {object} dog - the instance of the Dog |
| 6 | * @returns {undefined} |
| 7 | */ |
| 8 | function DoggyRound(round, dog){ |
| 9 | // add code here |
| 10 | |
| 11 | } |

You may use the following Methods

Dog-Methods

| | |
|--------------|---|
| Name | IsHungry() |
| Parameter | none |
| Beschreibung | Returns a Boolean value if the dog is hungry or not (hungry – a state, at which he loses additional energy per round) |
| Returns | Boolean |

| | |
|--------------|--|
| Name | IsThirsty() |
| Parameter | none |
| Beschreibung | Returns a Boolean value if the dog is thirsty or not (hungry – a state, at which he loses additional energy per round) |
| Returns | Boolean |

| | |
|--------------|---|
| Name | IsAbleToBark() |
| Parameter | none |
| Beschreibung | Returns a Boolean value if the dog has enough energy left to bark |
| Returns | Boolean |

| | |
|--------------|---|
| Name | IsAbleToGrowl() |
| Parameter | none |
| Beschreibung | Returns a Boolean if the Dog has enough energy left to growl. |
| Returns | Boolean |

| | |
|--------------|--|
| Name | GetEnergy() |
| Parameter | none |
| Beschreibung | Returns a number between 0 and 100 representing the Dog's energy level |
| Returns | Integer |

| | |
|--------------|---|
| Name | GetHunger() |
| Parameter | none |
| Beschreibung | Returns a number between 0 and 100 representing the Dog's hunger satisfaction |
| Returns | Integer |

| | |
|--------------|---|
| Name | GetThirst() |
| Parameter | none |
| Beschreibung | Returns a number between 0 and 100 representing the Dog's thirst satisfaction |
| Returns | Integer |

| | |
|--------------|---|
| Name | GetActivity() |
| Parameter | none |
| Beschreibung | Returns the currently determined activity, which the Dog is going to perform at the end of the round – Possible values are: "eating", "drinking", "idling", "resting", "barking", "growling" |
| Returns | String |

| | |
|--------------|--|
| Name | Eat() |
| Parameter | none |
| Beschreibung | Sets the determined activity to "eating" |
| Returns | undefined |

| | |
|--------------|--|
| Name | Drink() |
| Parameter | none |
| Beschreibung | Sets the determined activity to "drinking" |
| Returns | undefined |

| | |
|--------------|---|
| Name | Rest() |
| Parameter | none |
| Beschreibung | Sets the determined activity to "resting" |
| Returns | undefined |

| | |
|--------------|---|
| Name | Check() |
| Parameter | none |
| Beschreibung | Returns a Person if the person's position is 1 or higher. If it is 0 then a default Person with the type of "Nobody" is returned. |
| Returns | Person |

| | |
|--------------|--|
| Name | Bark(target) |
| Parameter | target - Person |
| Beschreibung | Sets the determined activity to "barking" if the target is valid. Barking costs less energy than growling but is also less efficient |
| Returns | undefined |

| | |
|--------------|---|
| Name | Growl(target) |
| Parameter | target - Person |
| Beschreibung | Sets the determined activity to "growling" if the target is valid. Growling costs more energy than barking but is also more efficient |
| Returns | undefined |

Person-Methods

| | |
|--------------|--|
| Name | GetPosition() |
| Parameter | None |
| Beschreibung | Returns the position, encoded as a number between 0-4 0 : "Nobody" is there, 1 : Person is coming, 2 : Person is almost in front of the fence, 3 : ready to do something, 4 : at the fence and has done something |
| Returns | Integer |

| | |
|--------------|---|
| Name | GetType() |
| Parameter | none |
| Beschreibung | Returns the type of the Person – Possible values are: "Nobody", "Child", "Teenager", "Thief" |
| Returns | String |

| | |
|-----------|---|
| Name | IsComming() |
| Parameter | none |
| Beschr | Returns a Boolean value if the Person is coming towards the fence or leaving. |
| Returns | Boolean |

GUI

