

# 01.01 Worksheet: What is Artificial Intelligence?



Name .....

Class .....

## Question 1

Write down the IF ... THEN, ELSE rules for the following rule-based AI. Some have been completed for you.

- a) If the car sees a pedestrian ahead, stop the car. Otherwise keep driving.

IF the car sees a pedestrian ahead THEN

stop the car

ELSE

keep driving

- b) If there is an opening for a goal, kick the ball towards the goal. Otherwise pass the ball to someone else.

IF \_\_\_\_\_ THEN

\_\_\_\_\_

ELSE

\_\_\_\_\_

- c) If the temperature is too hot, turn on the fan. Otherwise turn on the heater.

IF \_\_\_\_\_ THEN

\_\_\_\_\_

ELSE

\_\_\_\_\_

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d) If the computer sees your face, log on. Otherwise ask for your password.

IF \_\_\_\_\_ THEN

\_\_\_\_\_

ELSE

\_\_\_\_\_

e) If Alexa hears “Hey Alexa” it should ask you “How can I help you?”. Otherwise it should keep listening.

IF \_\_\_\_\_ THEN

\_\_\_\_\_

ELSE

\_\_\_\_\_

f) If a student submits their assignment, the system should send an email saying “received”. Otherwise, the system should send an email reminder to submit.

IF \_\_\_\_\_ THEN

\_\_\_\_\_

ELSE

\_\_\_\_\_

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- g) The doorbell should play a sound when a person is at the front door, otherwise keep quiet.

IF a person is at the front door THEN

the doorbell plays a sound

ELSE

the doorbell keeps quiet

- h) The monster in the game chases you when you are close to it, otherwise it keeps patrolling.

IF \_\_\_\_\_ THEN

\_\_\_\_\_

ELSE

\_\_\_\_\_

- i) The speakers should play music louder when the microphone detects loud sounds in the room, otherwise the speakers should play music at the normal volume.

IF \_\_\_\_\_ THEN

\_\_\_\_\_

ELSE

\_\_\_\_\_

- j) The webcam turns to follow you if you move, otherwise it stays still.

IF \_\_\_\_\_ THEN

\_\_\_\_\_

ELSE

\_\_\_\_\_

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## Question 2

Think about some uses of rules-based AI in your own life. It could be around your house, school, a phone app, electronics, social media, a place you've visited etc.

Describe the use of rules-based AI in your life below:

Complete a rule for the AI which you described above:

IF \_\_\_\_\_ THEN

\_\_\_\_\_

ELSE

\_\_\_\_\_

## Question 3

Refer back to the Chocolates Game you played at the start of the lesson.

Can you complete the following rules which the computer uses to always win?

IF the player picks 1 chocolate THEN

the computer picks        chocolate(s)

IF the player picks 2 chocolates THEN

the computer picks        chocolate(s)

IF the player picks 3 chocolates THEN

the computer picks        chocolate(s)

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