CAMBRIDGE
International Education

Cambridge International AS & A Level

INFORMATION TECHNOLOGY **9626/04**

Paper 4 Advanced Practical **February/March 2026**

2 hours 30 minutes

You will need: Candidate source files (listed on page 2)

9156970139

INSTRUCTIONS

- Carry out every instruction in each task.
- Save your work using the file names given in the task as and when instructed.
- You must **not** have access to either the internet or any email system during this examination.
- You must save your work in the correct file format as stated in the tasks. If work is saved in an incorrect file format, you will **not** receive marks for that task.

INFORMATION

- The total mark for this paper is 90.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **12** pages.

DC (PQ/CB) 366133/1

You have been supplied with the following source files:

ANDGate.css
ANDGate.html
ANDGate.png
ANDGateAnimation.mp4
ANDGateBody.png
ANDGateSim.mp4
Chip.png
ChipsData.xlsx
ChipLeg.svg
CircuitBoard.png
Stream1.png
Stream2.png

Create a folder called **Examination**

You must save all your work in this folder.

Copy these files into this folder.

Do **not** delete these files when submitting your work.

You must use the most efficient methods to solve each task.

All work produced must be of a professional standard and contain your candidate details.

Task 1

(a) You will create 4 charts to visually compare the sales of semiconductors.

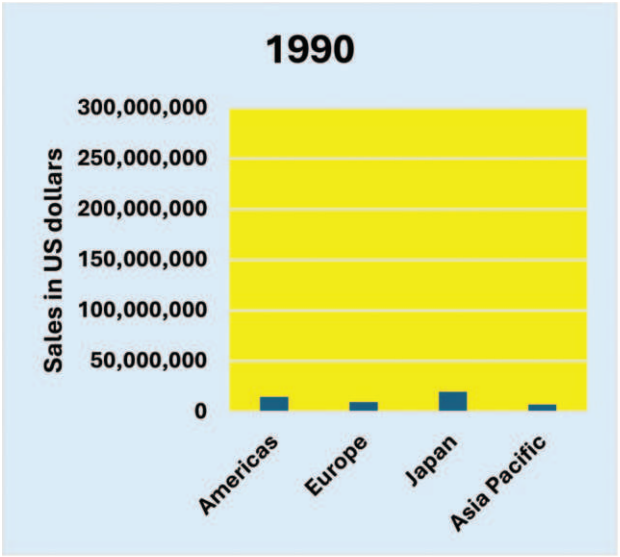
Open **ChipsData.xlsx** in a spreadsheet application. Save the workbook as **ChipsData_**followed by your centre number and candidate number
For example, ChipsData_ZZ999_9999

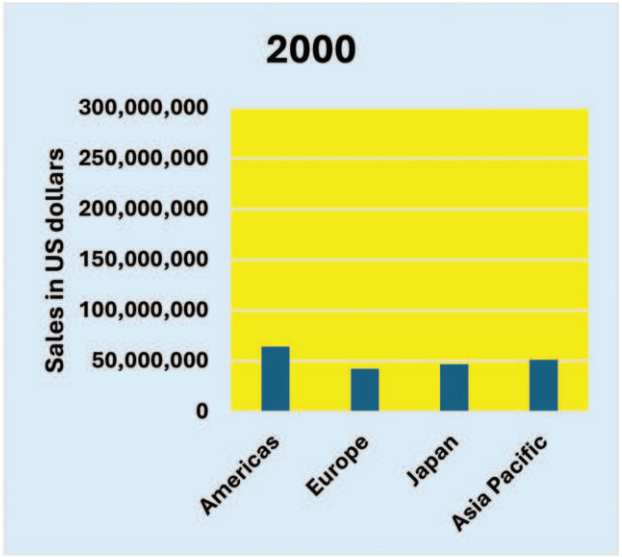
The data shows the sales of semiconductors from 1986 to 2023.

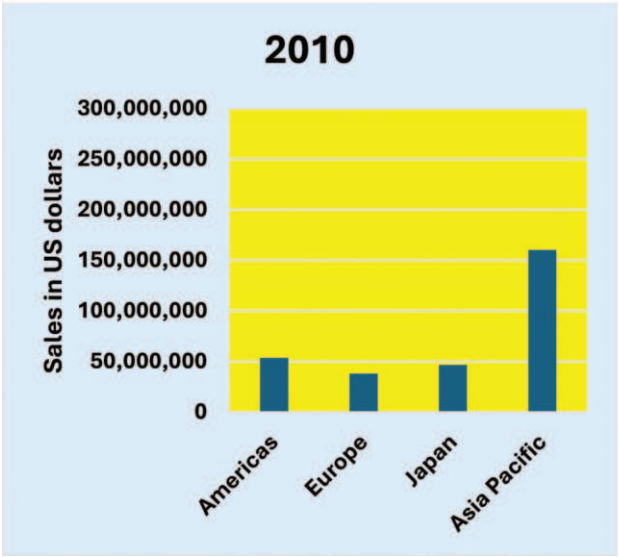
Create charts using this data to show the sales of semiconductors for **only** the years 1990, 2000, 2010 and 2020.

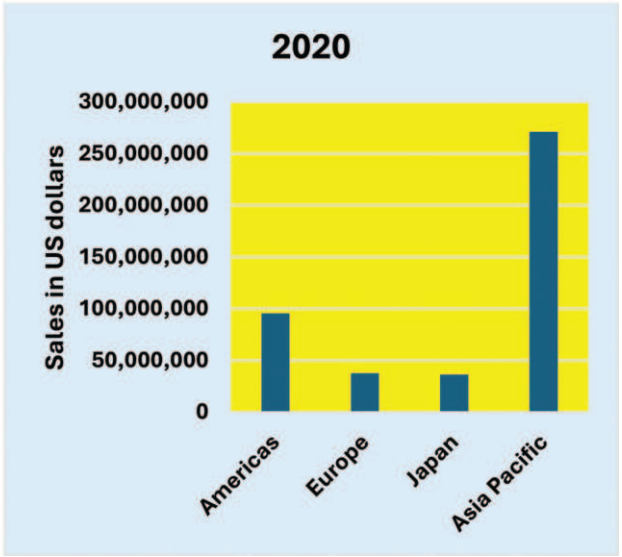
For a valid comparison of the data the vertical axes must use the same range.

The charts must look like this:



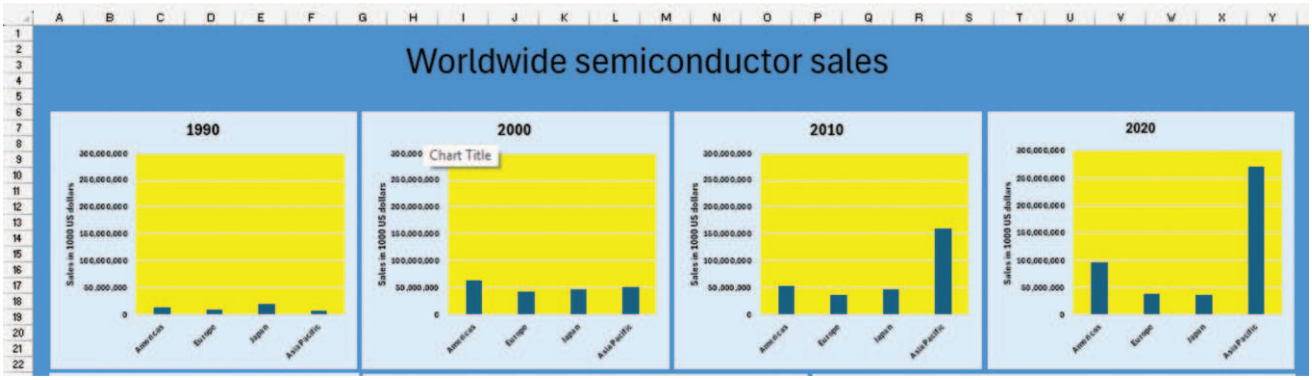






Add a new worksheet with the name **Summary**

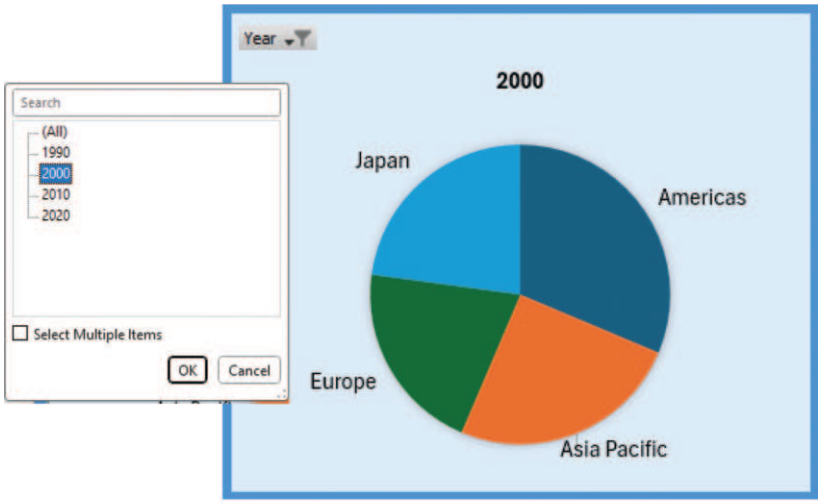
In this worksheet create a dashboard to display your charts. Format the sheet and charts like this:

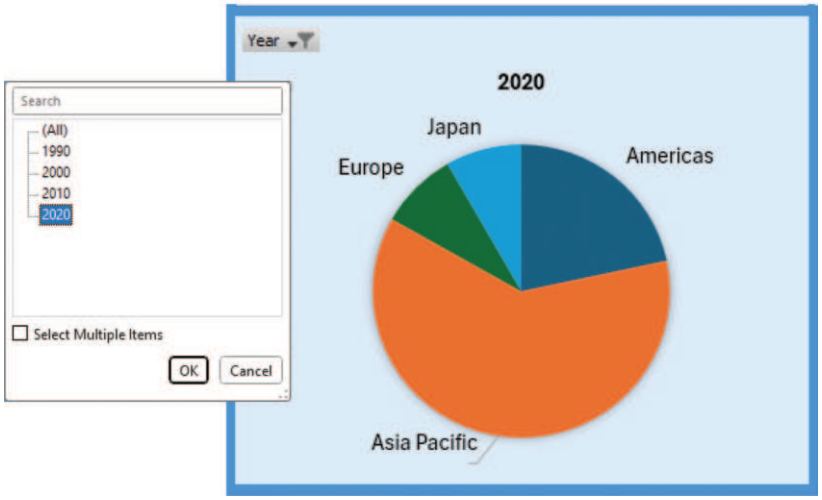


[17]

(b) Create a single dynamic pie chart that allows the user to select and display the data for either 1990, 2000, 2010 or 2020.

The chart must display the sum of the sales for each region.
The chart title must be dynamic and display the year selected like this.





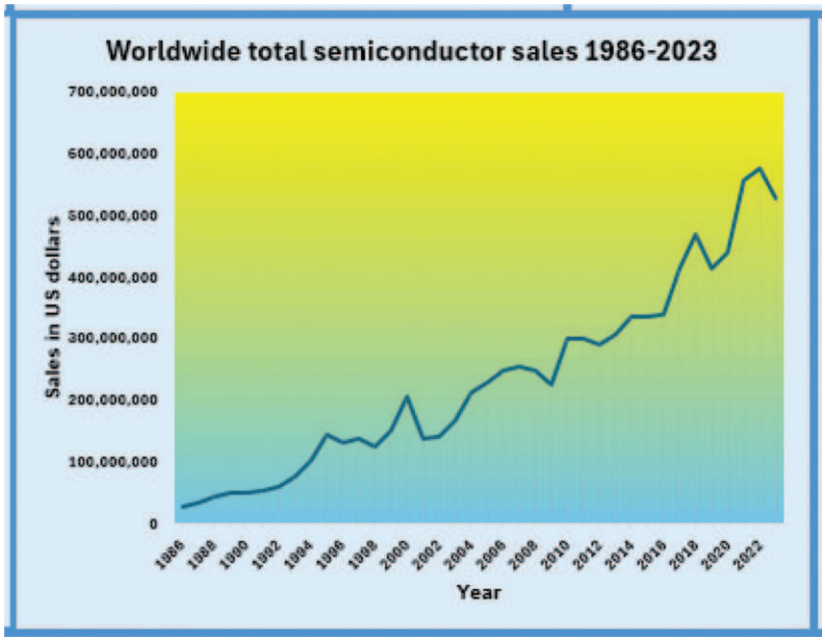
Save your workbook.

[8]

(c) Calculate the worldwide total semiconductor sales from 1986 to 2023.

Year	Worldwide Total
1986	26,355,359
1987	32,530,452
1988	45,004,809
1989	48,762,926
1990	50,518,932
1991	54,607,454

Create a chart using this data and format it like this.



Save your workbook.

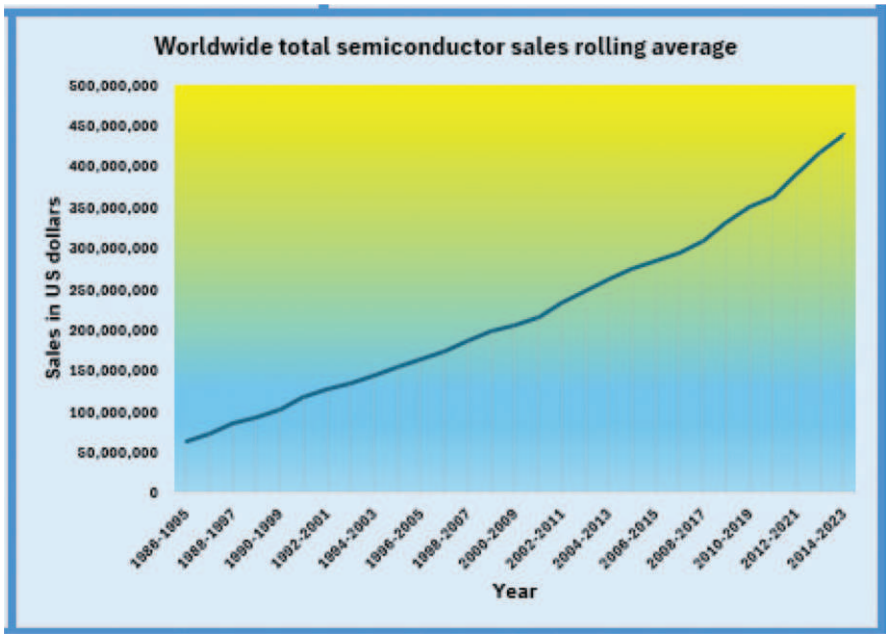
[6]

(d) Calculate the 10 year rolling average of the worldwide total sales.

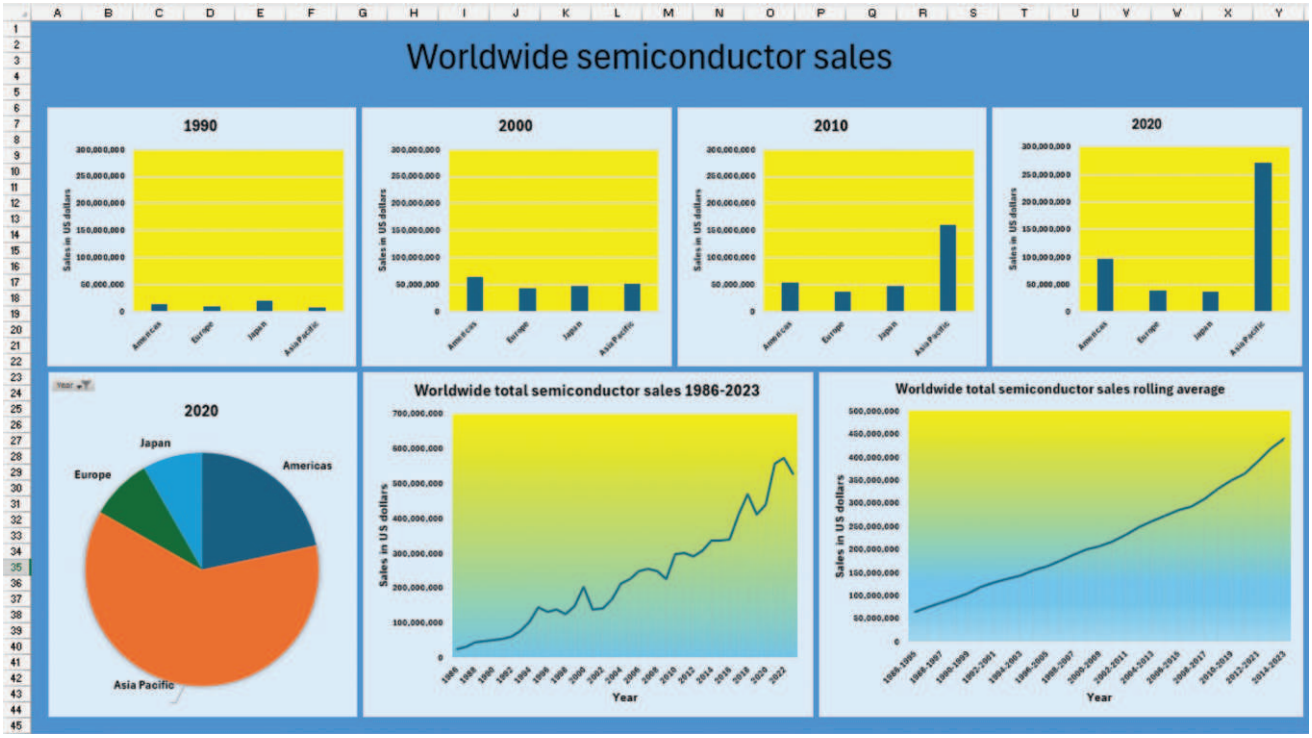
This can be created by calculating the average for each 10 year period.

Years	10 Year Rolling average
1986-1995	64,123,685
1987-1996	74,684,792
1988-1997	85,152,059
1989-1998	93,212,778
1990-1999	103,274,340
1991-2000	118,661,809
1992-2001	137,007,225

Create a chart using this data and format it like this.



Add the charts to your summary worksheet like this.



Save your workbook.

[4]

Task 2

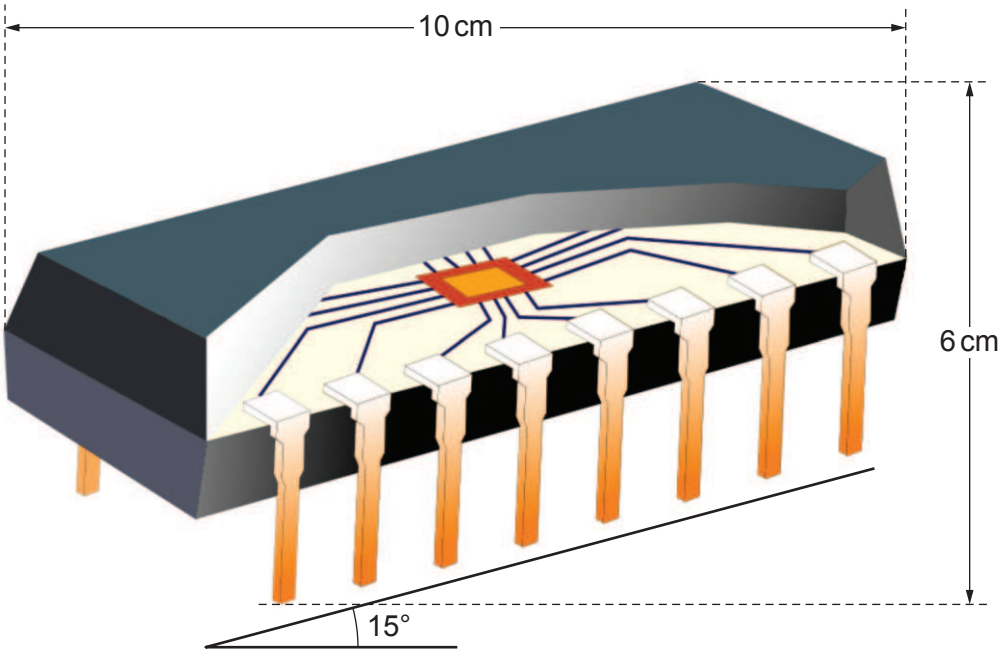
(a) Create a vector image of a chip using the file **Chip.png** as a template.

Match the shapes, proportions, colours and gradient fills to those shown in this file.

Use **ChipLeg.svg** for the legs which must be evenly spaced.

Your vector image must **not** contain any bitmap elements.

Resize your final image to the sizes shown.

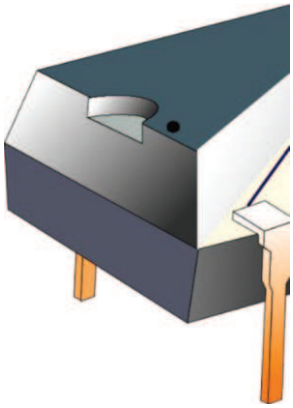


Save the image as a scalable vector graphic named **Chip**_followed by your centre number_candidate number

For example, Chip_ZZ999_9999.svg

[26]

(b) Edit the image as shown.



Save your image as a scalable vector graphic named **ChipPlus**_followed by your centre number_candidate number

For example, ChipPlus_ZZ999_9999.svg

[4]

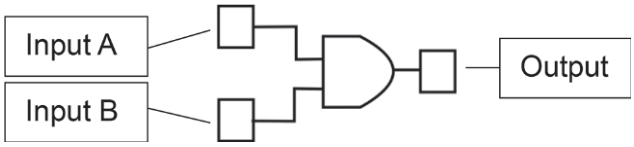
Turn over

Task 3

Open and view **ANDGateAnimation.mp4** in a media player.

You are required to create a similar animation.

Open **ANDGate.png** in an image viewer. The image represents an `AND` logic gate where both inputs must be positive for the output to be live.



Open **Stream1.png** and **Stream2.png** in an image viewer.

These images represent streams of 1s and 0s which you must use to simulate binary data sequences.

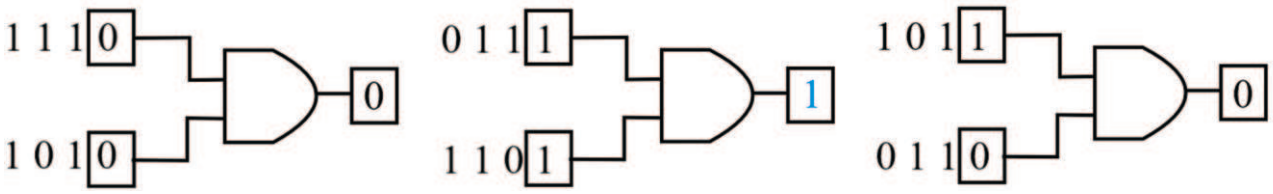
Stream1 1 0 1 1 0 0 0 1 0 1 1 1 0 1 1 0 0 1 0 1 1 1 0

Stream2 1 1 0 0 1 0 1 1 1 0 1 0 1 0 1 0 1 1 0 1 0

The animation must show the two streams entering the inputs of the ANDGate image and displaying **0** in the output unless both the input boxes display **1**.

Both streams must move from left to right at the same speed.

Examples:



In your animation software set the frame size to 500 pixels wide by 400 pixels high.

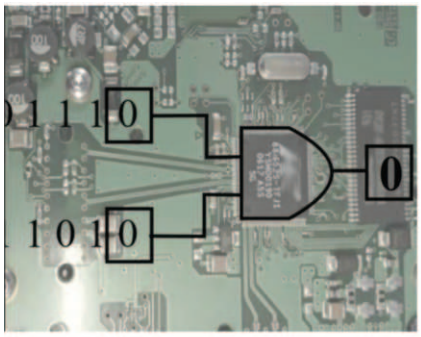
Use **CircuitBoard.png** as the background.

Resize the image to fit the frame.

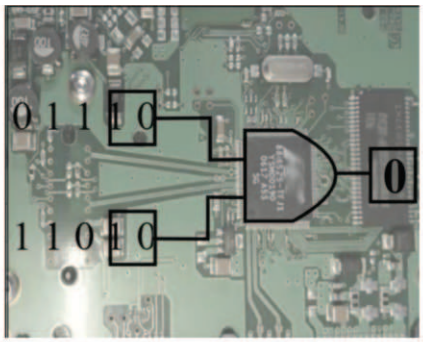
Place the ANDGate image as shown.

Each number in the streams must take one second to move into the input boxes and disappear as the stream moves from left to right.

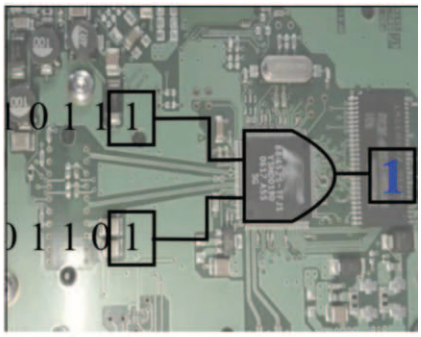
The number in the output box must display 0 unless both the input boxes display 1.



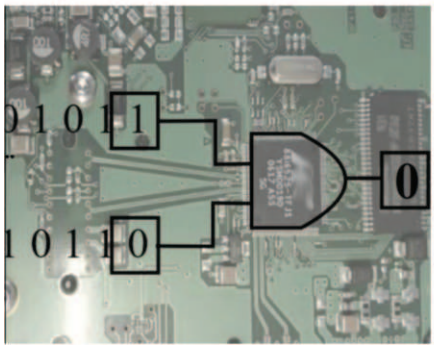
At the start



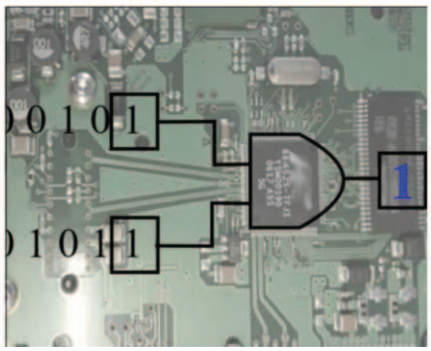
During the tween



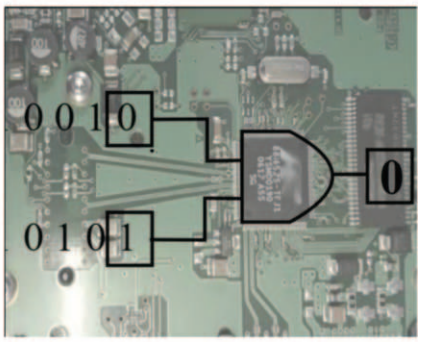
After 1 second



After 2 seconds



After 3 seconds



After 4 seconds

The animation must loop continuously.

Save the animation as an animated gif with the file name **ANDGate**_followed by your centre number_candidate number

For example, ANDGate_ZZ999_9999

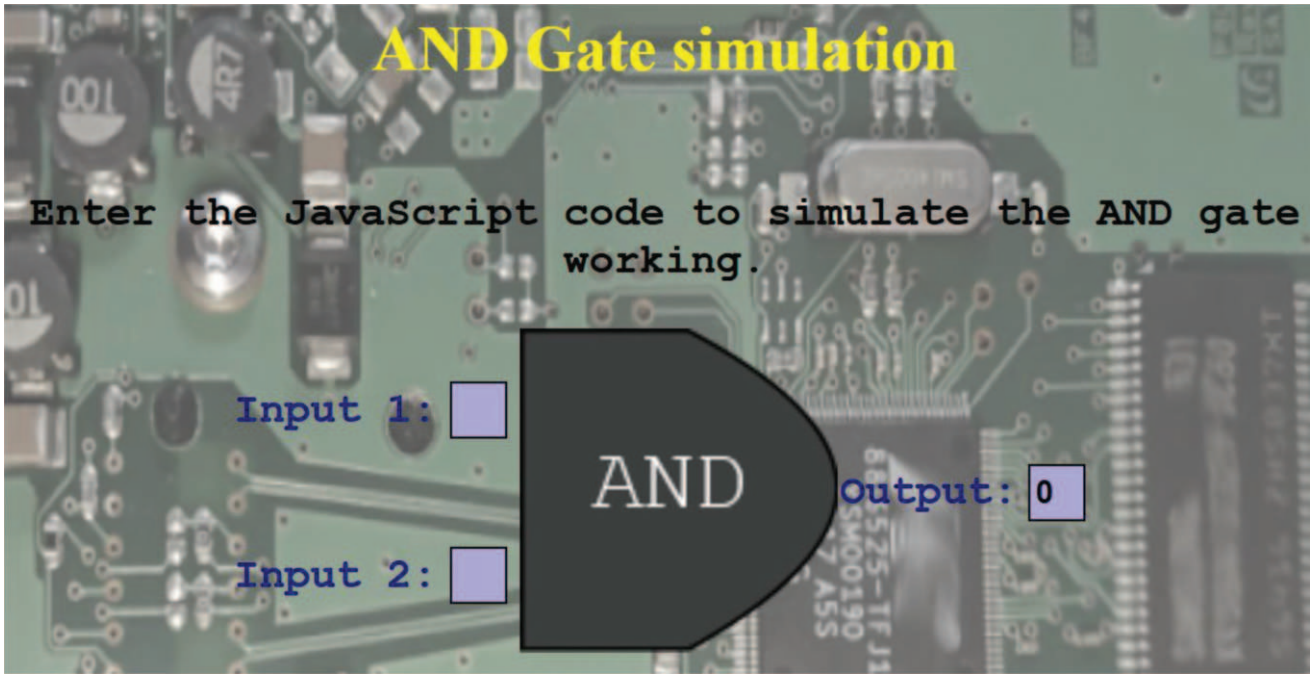
[15]

Task 4

Create a folder named **JSTask**

Copy the files **ANDGate.css**, **ANDGate.html**, **ANDGateBody.png** and **CircuitBoard.png** into the JSTask folder.

Open **ANDGate.html** in a browser and in a text editor.



Open **ANDGateSim.mp4** in a media player and watch the video.

Add JavaScript code to the ANDGate.html file so that the output box only shows 1 when both input boxes are set to 1, as shown in the video.

Make sure both inputs can only display 0 or 1.

Save your webpage as **AndGateDemo**_followed by your centre number_candidate number

For example, AndGateDemo_ZZ999_9999

[10]

