



We will create a version of the Snake game using AppInventor.



✤ App Inventor is an online software development tool that allows users to create Android applications.



Snake is a classic video game where the player controls a snake that moves around a field avoiding walls and eating food to grow. The aim of the game is to make the snake grow as much as possible without hitting walls or its own tail. If the snake hits a wall or its own tail, the game is over. The game was originally developed for mobile phones, but has been adapted for many other platforms, including computers and game consoles. It is also possible to play online versions of the game.

If you have the skills to create another game or make our game evolve you can!





Go to the following link: <u>http://appinventor.mit.edu/</u> and click on 'Create Apps!'. <u>You need a google</u> <u>account.</u>

Click on 'Projects' and 'Start new project'. Give your file a name, for example : 'Snake.Name'.

You have two tabs: 'Designer' and 'Blocks'





'Designer' is for the creation of the man-machine interface: this will be the look and feel of your application. The 'Palette' tab on the left contains all the elements that can be positioned on the phone screen.

'Blocks' it is for the **programming** itself: it will allow, by **assembling blocks** to **create** the **behaviour** of the **application**.







1) Put a 'horizontal arrangement'. And insert two labels. In label 1 put the text 'Score'. In label 2 put the text '0' and rename this label 2 to 'Score'.

Snake	Screen1 • Add Screen	. Remove Screen Publish to Gallery		Designer Blocks
Palette	Viewer		Components	Properties
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Layout			Upload File	TextColor

2) Set the playspace as follows: in 'Drawing and Animation' select 'Canvas' and insert it into the screen. Make sure to respect the properties as in the image below: 60% height and 100% width. Still in 'Drawing and Animation' you have 'Ball'. Insert the ball and in 'Properties' set the ball to a radius of 10.

Snake	Screen1 •	Add Screen	Remove Screen	Publish to Gallery		Designer Blocks
Palette	Viewer				Components	Properties
Search Components			(Display hidden components in Viewer	Screen1	Ball1
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3) Download the image of any fruit. In 'Media' insert the image of this fruit.

Media	
C	herry.png
	Upload File

4) **Insert 'ImageSprite'** into the **game space**. In the **'Properties'** tabs and **'Picture' select** the **fruit image** to be downloaded. Set the **height** and **width** to **20 pixels**.

Palette Viewer Components Properties Search Components. Display hidden components in Viewer Pin Screen1 Cherry User Interface Phone size (505,320) v Pin Screen1 Enabled Layout Components Pin Screen1 Enabled	Snake
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Extension Media	Extension





5) **Insert three 'HorizontalArrangement' below** the **playing area**. Set the **height** to **7%** and the **width** to **100%.**

Snake	Screen1 •	Add Screen	Remove Screen	Publish to Gallery		Designer Blocks
Palette	Viewer				Components	Properties
Search Components User Interface Layout HorizontalArrangement • HorizontalScrollArrangement • TableArrangement • VerticalArrangement • VerticalArrangement •				Display hidden components in Viewer Phone size (505,320) V Screent Score 0		HorizontalArrangement4 AlignHorizontal Center: 3 • AlignVertical Top: 1 • BackgroundColor Default Height 7 percent
Media Drawing and Animation Maps Charts Sensors					HorizontalArrangement4	100 percent
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Experimental					Cherry.png	

6) Under 'User interface' you have 'Button'. Insert the four buttons 'Up', 'Down', 'Left', 'Right' in the horizontal arrangements. Don't forget to rename the buttons as below.

Snake	Screen1 • Add Screen Remove Screen	Publish to Gallery		Designer Blocks
Palette	Viewer		Components	Properties
Search Components User Interface		Display hidden components in Viewer Phone size (505,320)	 Screen1 HorizontalArrangement1 	Up BackgroundColor
Button 0 CheckBox 0		© ⊜∡al 8 9:48	Label1	Default Enabled ☑ FontBold
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ListPicker ⑦ ListView ⑦ ListView ⑦ ListView ⑦			 HorizontalArrangement3 Left Right 	14.0 FontTypeface default
■ PasswordTextBox ? ■ Slider ? ■ Spinner ?		<u>م</u>	 MorizontalArrangement4 Down 	Height Automatic Width Automatic
Switch Switch TextBox TimePicker TimePicker		Left Right	Rename Delete	Image None Shape
WebViewer 🔊			Media Cherry.png	default • ShowFeedback





7) In the 'Blocks' tab, do the following program. Try to understand the program !





8) We created the human machine interface and programmed our application. Now we will upload our game to our phone. The phone we are using has to be Android. To do this click on 'Build' and 'Android App (.apk)'. Wait and scan the QR code with your phone. Download your game.

Blocks	Screen1 • Add Screen			、	
Snake			Android App (.apk) Android App Bundle (.aab)		
	Projects • Connect •		Build • Settings • Help •		

Good Game!

