



# ATL Game Development Platform









### **Day 06**











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02

04

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## Agenda of the day

**Reflections of Week -1 (Day 1- 5)** 

Introduction to Construct with Features, Installing Software and Downloading Asset

Construct Interface, Creating Layouts, Layers, Objects, Projects and Setting up Menu Layout and Menu Event

Home Assignment, Q&A











# **Reflections of Week -1 (Day 1-5)**

- Introduction to Scratch
- **Cyber Security**





## Building STEM based Animations/Project/Games









## Introducing the Construct 2 Game Engine

- Construct is for anyone who want to games but do not create have enough knowledge of programming language.
- ✓ Construct is one such popular & game development interactive platform that offers fast, crossplatform game development.
- $\sqrt{1t}$  has a powerful event scripting aims that system at non-











## **Construct Game Engine**

**Features** 

### CONSTRUCT





### **Popular and Interactive**

### Built for Non-Programmers

### 2D Game Development Interface

"Drag and Drop" method of programming

















### To download the latest release of Construct http://www.scirra.com/construct2/releases/

#### new

**NOTE** : Remember to stay up to date and use the latest version of Construct 2.

### Things to keep in mind

### **Versions of Construct**

Construct comes in 32-bit (for older computers) and 64-bit (for newer computers).

If you're not sure you can leave the setup to auto-detect.

### If setup fails:

Try a portable installation instead. Install Construct 2 to a removable drive on a computer you can run the setup on, then try taking the removable drive to the limited computer and running it from the drive.



### **Once Construct 2 is downloaded, the Setup will** begin to install it to the computer. <u>Click Next > to</u> advance through the steps.

**NOTE:** Construct 2 can still be installed on limited user accounts without administrative access. (Eg - workplaces, schools, public *computers*)

**NOTE** : The browser or Windows may show a security warning before setup. Ensure the publisher is Scirra Ltd before running.

### **Recommended system** requirements

- Windows 7 or newer • 2 GB RAM
- 2 GHz dual-core processor
- A nVidia or AMD graphics card





























# The Opening Screen







### When we first start Construct 2, we should see the **Start Page**

Look out for the useful links here such as Create a new project, Project examples and the Newest tutorials









## Your Work Screen













## Your Work Screen



**Layout View** 

**View Tabs** 







⊜	Layout Properties					
	Name	Layout 1				
	Event sheet	Event sheet 1				
	Active layer	Layer 0				
	Unbounded scr	No				
10	Layout Size	1280, 1024				
10	Margins	500, 500				
Pe	ject Properties	Xee				
14	information	Help				

#### **Properties bar**



Concern: Levers

### **Object Bar**

Mouse: 2772.0, 438.0, 51 2400m 100%







## Your Work Screen



### **Status Bar**



### **Top-right buttons**



### Note : Customising

- Any of the bars can be dragged and dropped to different positions in the editor window.
- We can *auto-hide* bars to save room: Click the pin icon on a bar and it will shrink to a simple tab. Hover the tab to pop open the bar.
- Bars can be hidden and shown in the **View** ribbon tab.
- We can create a **split-screen** view by clicking and dragging one of the layout or event sheet tabs in to the main view.



ETS LEARNING





# Projects Primitives











### Projects & Project Properties A project is a complete game of app made in Construct 2.

Projects contain every element making up the game, ranging from events to sound files.

An overview of the project is shown in the project bar. where elements can be added, renamed, removed and arranged in to folders for organisation.

(Projects can be opened, closed and exported from the File menu)





Properties				
Ť	2			
	About			
	Name	New project		
	Version	1.0.0.0		
	Description			
	ID	com.mycompan		
	Author			
	Email			
	Website	http://		
	Project settings			
	First layout	(default)		
	Use loader layout	No		
	Pixel rounding	Off		
	Preview effects	Yes		
+	Window Size	854, 480		
	<b>Configuration Sett</b>	ings		
	Preview browser	(default)		
	Fullscreen in bro	Letterbox scale		
	Fullscreen scaling	High quality		
	Use high-DPI dis	Yes		
	Orientations	Landscape		
	Enable WebGL	On		
	Sampling	Linear		
	Downscaling	Medium quality		
	Physics engine	Roy2D asm is		





## Layouts

Pro	operties	д 🔀
***	21	
Ξ	Layout propertie	5
	Name	Layout 1
	Event sheet	Event sheet 1
	Active layer	Layer 0
	Unbounded sc	No
Ð	Layout Size	2048, 1536
Ð	Margins	500, 500
Ξ	Effects	
	Add / edit	Effects
Project Properties		View
More information		Help





6	Layer properties		
	Name	BlankM	I
	Initial visibility	Visible	1
	Background color	255	
	Transparent	Yes	
	Opacity	100	ļ
	Force own texture	Yes 💌	1
	Scale rate	100	1
æ	Parallax	100, 100	
	Editor properties		
	Visible in editor	Yes	
	Locked	No	







### **Instance variables**

Instance variables are added to an object type and store numbers or text per instance

### Instances

These are the number of objects of a particular type in a layout

### **Object types**

Object types define a 'class' of an object.

### Plugins

Plugins define a kind of object. For example, a Sprite is a kind of object.

## **Objects**





### **Behaviors**

This can be added to **object** types to add pre-packaged functionality. These have numerous shortcuts

### Effects

Effects change the visual appearance of an object. They require WebGL support to function

### **Objects in Construct** consist of the following parts

### Families

They are groups of object types. That can help avoid repeating events in large projects

### Containers

Containers are an advanced feature for picking a group of instances at the same time in avanta







The basic concept of events is that conditions filter the instances meeting the condition, then the actions run for those instances only. This allows you to control instances independently, especially when used with instance variables.



ns	_
	٦
me scale to 0.5	



### **Conditions**

Actions

**Expressions** 

**Sub-Events** 

Groups

Comments

Includes

**Event Variables** 

**Event Sheets** 







- Launch Construct 2.
- Click the File button, and select New.
- See the 'Template or Example' dialog box.
- It shows a list of examples and templates you can investigate at your leisure.
- For now, just click on 'Open' at the botton the box to create a blank, empty new proje
- We should now look at an empty layout design view where we create and posiobjects.

## Notes: Construct 2 will keep the entire project a single .capx file for us

### Creating a Project





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	) * (* * Home	▶ ₹	v	
that	ew	_		
lial	pen	Select terr	plate or example	
		Select a	template to start with or an example to open:	ø
n of			New empty project Create a new empty project with default sets	ngs.
the		D	New retro style project Create a platform-neutral project with setting games (such as pixellated rather than smooth	s and objects suited to scaling).
tion		D	New empty SD landscape 4:3 project Create a new empty project with a standard of	definition 4:3 landscap
		D	New empty SD portrait 4:3 project Create a new empty project with a standard of	definition 4:3 portrait s
ct in		D	New empty SD landscape 16:9 project Create a new empty project with a standard of	definition 16:9 landsca
		B	New empty SD portrait 16:9 project Create a new empty project with a standard of	definition 16:9 portrait
			New empty HD landscape 720p project	
		Help		Open







# nserting objects

### **Tiled background**

- First, Download a background image and save it in computer.
- Now, double click a space in the layout to insert a new object.
- Once the Insert new object dialog appears,
- Double click the Tiled Background object to insert it.

Insert New Object			
Double-click a plugin to crea	ate a new object type from:		
Data & Storage		Edit texture	: Tile
General Sprite Text	Tiled Background		⊕
Input			
S ()			
Keyboard Mouse Web	Touch		
Name when inserted:	TiledBackground		
Description: Help	Automatically tile a texture over an area.	Insert Cancel	





Ξ	Object Type Properties			
	Name	TiledBackground		
	Plugin	Tiled Background		
	Common			
	Layer	Layer 0		
	Angle	0		
	Opacity	100		
	Position	0, 0		
	Size	1280, 1024		
	Instance wariables			
	Edit variables	Add / edit		













- Layouts can consist of multiple layers, which we can use to group objects.
- Imagine layers like sheets of glass stacked on top of each other, with objects painted on each sheet. It allows us to easily arrange which objects appear on top of others, and layers can be hidden, locked, have parallax effects applied, and more.
- For example, we want everything to display above the tiled background, so we can make another layer on top for our other objects.











## Project Structure



### Sample of project structure







#### Sample of project structure





# Setting up MENU

### Text based menu

• Create text objects

### • Create Layers

Start		Method 2 Diject types Dim Controls Dim Method 2 Method 1
Options		T Text_Instructions T Text_Options T Text_Reset T Text_Start
Instructions		T Credit T Credit2 Families MenuSprite
Reset	1	Sounds Music  Projects Layers  Objects  All 'Method 1 - Text' objects
		Controls Method 2
		Method_1 Test T Credit T Credit2
		LJ LJ



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ı Text	1		
jround			0

### • Create & add families



#### & fill family • Create variables

_	-					
	Family instance var	Family Instance variables				
	Layer	Menu Text				
	PosX	320				
	PosY					
	SizeX					
	SizeY	50				
	TextSize	28				
	ColourRed					
	ColourGreen					
	ColourBlue					
	MouseOverRed	0				
	MouseOverGreen	204				
	MouseOverBlue	255				
	Туре					
	Destination					
	Edit variables	Add / edit				
	Rehaviors					





# Let's Practice - Homework of the day

# **Download and Install Construct -2**





















### **Thank You!** For more info, please write to:

To learn more about visit www.planetcode.in

For Feedback visit https://rb.gy/mi3xw9







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