◈ **unity**

# Solution Guide:
# Unity for mobile games

A practical guide to help you get started and gain the most value when developing mobile games using Unity.

# Welcome to Unity

More mobile games are made with Unity than with any other game technology, with companies such as Disney, Electronic Arts, LEGO, Microsoft, NASA, Nickelodeon, Square Enix, Ubisoft, Obsidian, Insomniac and Warner Bros relying on our tools and features to drive their business.

Unity is not just a game engine for building beautiful and engaging 2D or 3D games, It's a complete platform that enables you to deploy to all the major and emerging mobile operating systems, speed up your development process, optimize your game, connect with an audience, and achieve commercial success.
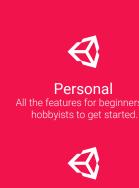
# Contents

# 01 First steps



### Personal
All the features for beginners & hobbyists to get started.



### Plus
For serious creators looking to bring their vision to life.



### Pro
For professionals looking to profit from advanced customization and complete flexibility.

If you run into issues or need help installing Unity - check *this part* of our manual, which will guide you through the process step-by-step.

## Get Unity
Choose the edition that's right for you here: *https://store.unity.com/*

## Get up to speed with working in Unity
If you're new to Unity, here's our recommended learning resources to get started:

1. Unity Interface & Essentials:
Everything you need to know to get started using Unity, from basic
concepts to extending the interface.

2.Roll-a-ball tutorial:
(approximately 2 hours)
This tutorial introduces you to Unity development by guiding you through creating a simple rolling ball game. It teaches you many of the principles of working with Game Objects, Components, Prefabs, Physics and Scripting.

3.Mobile & Touch concepts:
Essential information when creating content for mobile & touch devices.

Once you've completed the material above, you'll be ready to explore the wide range of tutorials in our *learn section*. We also offer *extensive documentation* about both scripting and the editor interface, as well as a list of best practice guides from our support engineers and R&D content team.

The Unity community also offers an extremely rich and diverse source of material.

Just search the web for "Unity tutorial [Add the topic of your interest] , and you'll find lots of great resources.

You could also consider commercial training like the *Complete Unity Course on Udemy*.

## Get involved in our community
If you get stuck, there is always help to be found in the Unity community. Answers is where our developers help each other with concrete responses to specific questions.

The *forums* are the central hub of our community discussions and chatter.
Here you can voice your opinion, show what you're working on, and check out the cool things others are doing.

External community & forum sites are also worth exploring for questions/discussions. Two particularly worthwhile forums to visit are *Stackoverflow* and *Reddit*.

There are also *Unity user groups* all over the world where you can get together with people in local groups to exchange ideas, work together on Unity projects and socialize. Some groups also offer introductory seminars for new users.

Finally, if you need to find freelancers to help out, or when you are ready to build your team, you'll find the right talent on *Unity Connect*.

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# 02 Resources on the Asset Store

## Additional Unity packages to download on the Asset Store:

Unity Technologies releases some features, which are not included in the initial Unity installation, as fully supported parts of the product available for free on the Asset Store. Here's list of recommended packages to get:

### TextMesh Pro:

The ultimate text solution for Unity. It features advanced text rendering with dynamic visual text styling, along with greatly improved control over text formatting and layout. It will be natively integrated in future versions of Unity.

### Anima 2D:

Helps you improve your 2D animation skeletal workflow. It will be fully integrated in future versions of Unity.

### Standard Assets:

This collection of assets, scripts, and example scenes can be used to kickstart your Unity learning or as the foundation for your own projects.

*The package includes:*
First Person Character Controller, Third Person Character Controller, Car Controller, Aircraft Controller, Particle Example Scene, Rollerball Controller, Sample 2D Platformer Scene, Camera Rigs Cross Platform Input: Various mobile control rigs ready to drag and drop into your scenes.
AI Examples: Showing how - with the proper set-up - you can swap user input for a simple AI input

## Learn from complete games

The R&D Content Team at Unity create complete projects, which can be downloaded on the Asset Store, and accompanying learning material. You can use these projects to discover and learn about new features and improve your Unity skills. The following is a project you can download.



### Tanks!!! Reference Project:

The Tanks!!! Reference Project shows how Unity Multiplayer can be implemented in a real world environment, addressing common challenges like network latency and cheating.

This package has everything you need to understand and build the live multi-platform game including code, assets, and walkthrough documentation. You can try the game now, on *iOS*, *Android*, *MacOS*, or *Windows store*, and you can download the sample project for free on the *Asset Store* We also offer a *tutorial series* teaching the game architecture and game mechanics.

# 03 Other support resources

> "
> We've collected a few of these basic best practices from our Enterprise Support engineers and the Unity R&D Content team.
> "

## Need help with C# scripting in Unity?

If you are new to programming, we suggest visiting our dedicated _scripting section_, which offers learning material on both beginner and advanced levels. If you're already familiar with programming but need help with specific coding questions, we recommend using our _answers section,_ where you can post and find answers to your coding questions from the community. We also have an extensive _scripting reference guide_, which offers guidance on the scripting API that Unity provides.

## Are you a teacher?

We offer a whole range of support options

for teaching, including free licenses for students and academic institutions and a _Curricular Framework_ for developing a relevant set of courses.

## Why not get a certificate to validate your knowledge?

_Unity offers an official certification program_

The Courseware focuses on the foundational skills essential to game production with Unity and directly maps to preparation for the _Unity Certified Developer Exam_. It's also a great solution if you are looking for a structured, self-study program to help you learn to make games with Unity.

## Best practices in Unity

Unity is a complex, feature-rich platform offering many different solutions to different problems you are likely to encounter in game development. As such, there are many opinions on the best practices for organizing your projects, building game logic, for object oriented programming and patterns, and for various techniques when working in the editor.

Nevertheless, there are certain basic principles, which if followed, will save you time and help you focus more on the creative aspects of game developvment. We've collected a few of these _basic best practices_ from our Enterprise Support engineers and the Unity R&D Content team.

# 04 Game making lifecycle

*Designing characters, gameplay mechanics and developing the logic are not the only aspects that matter in the lifecycle of making a game. Here are some other important actions you can take, including descriptions and how Unity helps for each:*

## 01 Sync ◁unity Collaborate

Sync your project across the team to enable your team to create work together efficiently. **Unity Collaborate** makes it easy to share your project online, invite participants and back up your projects.

## 02 Create ◁unity Cloud Build

Create continuous platform-specific builds on the relevant platforms as often as possible in order to detect early technical issues and distribute faster to your testers. **Unity Cloud Build** eliminates the burden of asking a developer or build engineer to make a binary version that testers can load on devices. You can simultaneously and effortlessly build for iOS & Android (and other platforms) in the cloud. And since Cloud Build is integrated with Collaborate, it works seamlessly for your entire team

## 03 Understand ◁unity Performance Reporting

Understand the health of your game in order to fix any problems and avoid bad ratings. As soon as your game is live, it's important to capture issues in real time. **Unity Performance Reporting** offers a complete crash reporting and analysis system to support that process.

## 04 Understand ◁unity Analytics

Understand your audience and how they interact with your content in order to ensure retention and success. **Unity Analytics**, which is natively integrated with the Unity engine, provides invaluable insight into your audience's behavior. This insight helps you optimize your gameplay experiences and monetization strategies based on real-time game data.

**Learn More:**
Learn how Mindstorm, one of Pakistan's leading game developers, is using Unity's built-in analytics to anticipate player needs and continually improve their games.
***Read the Mindstorm case study***

**Learn More:**
Learn how a hobbyist went from developing games in his spare time to growing into a thriving mobile game studio with seven full-time employees and games with more than 10 million downloads.
***Read the Twitter case study***

## 05 Monetization ◁unity IAP

Choose the right monetization model at an early stage in order to make sure it is well integrated with your game mechanics.For free-to-play games, Unity has a built-in ads platform and offers codeless IAP integration. Combine our plug & play *Unity Ads*, *IAP* and *Analytics* to improve your ARPDAU (Average Revenue Per Daily Active User) and user retention.

**Learn More:**
Next Games is among the first to successfully monetize a battle builder mobile game using rewarded video ads. Download their case study to find out how they created well-integrated rewarded video ads that have a high opt-in rate and drive $0.06 average revenue per player per day.
***Read the Next Games case study***

# Where to go next?

> "
> Remember, when you choose Unity you're never alone.
> "

We hope this solution guide has helped you get a great start on your Unity development project. Remember, when you choose Unity you're never alone. Our community pages are a great place to connect and find solutions to the issues you may encounter. We also encourage you to follow us on Twitter, Facebook, Youtube, Linkedin and on the Unity blog, where you'll find tips and guides to various facets of the Unity features, as well as product news, updates and inspirational case studies.

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