Winapps

Unlocking Career Opportunities through World-Class Professional Tech Training

> Boost your career with professional training.

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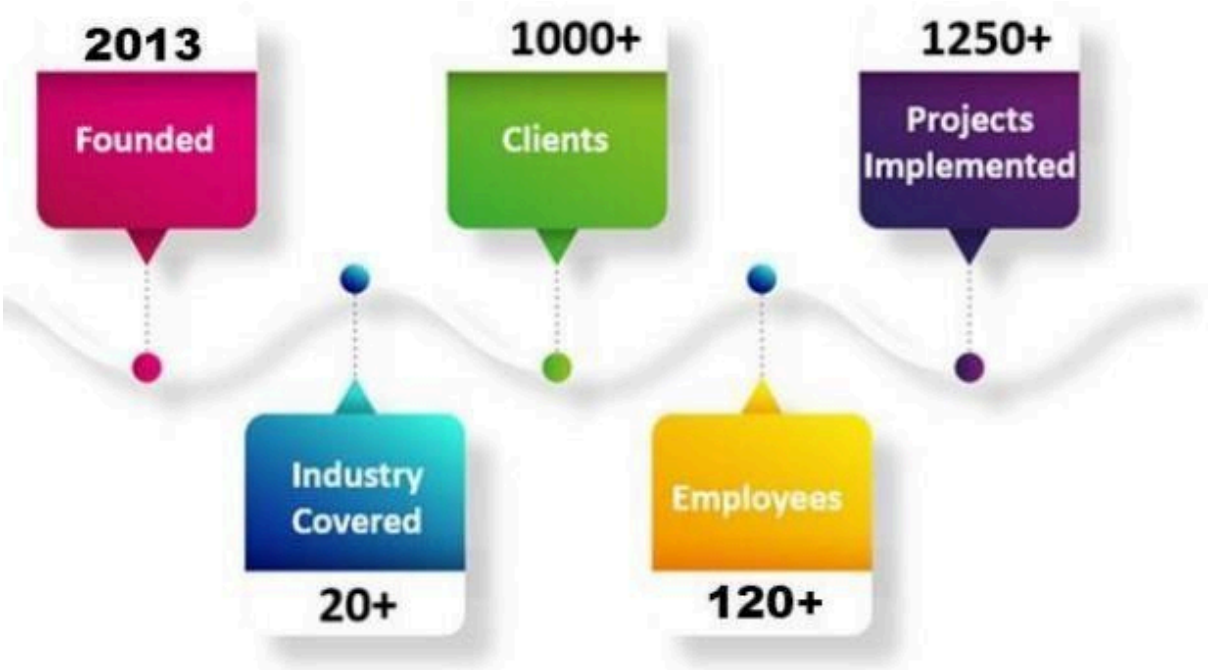
About Winapps Software Solutions Pvt.ltd.

Founded in 2013, Winapps provides IT solutions specially- tailored to its customers' needs, with a focus CRM Implementation, ERP implementation, web and mobile development. We bring security and integrity to the development process, efficiently blending our assets with your existing structure. We love to code; set your business process and we know how to do it right. Our approach, which combines innovation with timely delivery, is perfectly attuned to our clients' goals. Independent from the dynamism and complexity of business requirements, our vast, collective experience and comprehensive solutions library allow us to build cost- effective programming teams and set realistic budgets.



🎮 Unity Game Development – Industry-Ready Syllabus

Total Duration: 24 Weeks (Approx. 6 Months)
Mode: Instructor-led + Project-based + Self-practice
Outcome: Students will learn to **design, build, and deploy games using Unity and C#**, preparing them for roles as **Unity Developer**, **Game Programmer**, or **XR Developer** in gaming and immersive media industries.

Module 1: C# Programming & Unity Fundamentals

Duration: 3 Weeks

Learning Objectives:

- Build a strong foundation in **C# programming** for game development.
- Get familiar with **Unity Editor**, project setup, and essential workflows.
- Understand Unity's component-based architecture.

Subtopics:

- **C# Basics:** Data types, operators, control structures, methods.
- **OOP in C#:** Classes, objects, inheritance, interfaces, access modifiers.
- **Unity Editor Overview:** Interface, hierarchy, project structure, inspector.
- **Scenes & GameObjects:** Components, Prefabs, Tags, Layers.
- **Transforms & Coordinate Systems.**
- **Basic Scripting:** MonoBehaviour, Start(), Update(), public vs private fields.
- **Input & Events:** Keyboard, mouse, Unity Input System (intro).

Practical:

- Write C# scripts to move and rotate GameObjects.
- Build a simple interactive scene with prefabs.
- Configure editor layouts and shortcuts for productivity.

Module 2: 2D Game Development

Duration: 4 Weeks

Learning Objectives:

- Learn the fundamentals of **2D game design and development** using Unity.
- Implement character movement, collision detection, and level design.
- Understand game physics and UI basics.

Subtopics:

- **2D Project Setup:** Sprites, Tilemaps, sorting layers.
- **Physics & Collisions:** Rigidbody2D, Colliders, triggers, gravity.
- **Player Movement & Controls:** Keyboard, mobile input.
- **Camera Handling:** Cinemachine basics for 2D.
- **Game UI:** Canvas, Text, Buttons, Health bars, Menus.
- **Scene Management:** Switching scenes, additive loading.
- **Basic Game Loops:** Start, gameplay, end states.

Practical:

- Build a **2D platformer** with player movement, collectibles, and enemies.
- Add score and health UI.
- Implement multiple levels with transitions.

Module 3: 3D Game Development

Duration: 4 Weeks

Learning Objectives:

- Understand Unity's **3D environment**, lighting, physics, and navigation systems.
- Build interactive 3D gameplay mechanics.
- Learn character control and camera systems.

Subtopics:

- **3D Basics:** GameObjects, Meshes, Materials, Prefabs.
- **Lighting:** Directional, Point, Spot lights, Lightmaps, Baking.
- **Physics:** Rigidbody, Colliders, joints, gravity, triggers.
- **Character Controllers:** First/third-person movement, Cinemachine for 3D.
- **Navigation:** NavMesh, agents, pathfinding.
- **Terrain Tools:** Terrain editor, trees, textures, skyboxes.
- **Post-processing & Visual Enhancements.**

Practical:

- Create a **3D exploration game** with terrain, lighting, and camera controls.
- Implement AI navigation using NavMesh.
- Add environmental effects and post-processing.

Module 4: Advanced Gameplay Programming & Systems

Duration: 5 Weeks

Learning Objectives:

- Learn to implement **game systems**, AI, and advanced interactions.
- Structure larger projects using **ScriptableObjects**, events, and modular design.
- Introduce multiplayer basics and backend integrations.

Subtopics:

- **Events & Delegates:** Observer pattern, decoupling systems.
- **ScriptableObjects:** Data-driven architectures, config assets.
- **AI Programming:** Finite state machines, simple enemy AI, raycasting.
- **Inventory Systems:** Item pickups, ScriptableObject databases.
- **Save & Load:** PlayerPrefs, JSON serialization, persistent data paths.
- **Multiplayer Basics:** Unity Netcode for GameObjects (intro), Photon Fusion.
- **Backend Integration:** REST API calls, cloud save (Firebase or PlayFab).
- **Object Pooling & Performance Techniques.**

Practical:

- Build an inventory and save/load system for a game.
- Implement simple AI enemies using FSM and NavMesh.

Module 5: Optimization, Testing & Deployment

Duration: 4 Weeks

Learning Objectives:

- Learn to **optimize game performance** for mobile and desktop platforms.
- Implement **testing, debugging, and profiling** workflows.
- Deploy games to different platforms: PC, Android, iOS, WebGL.

Subtopics:

- **Optimization:** Draw calls, batching, LOD, light baking, occlusion culling.
- **Memory Management:** Profiling tools, garbage collection.
- **Testing & QA:** Debugging, breakpoints, PlayMode tests, test scenes.
- **Build Settings & Platform Differences:** PC vs Mobile vs WebGL.
- **Mobile Deployment:** Android SDK, iOS provisioning, device testing.
- **Version Control & Collaboration:** Git, Unity Collaborate, Plastic SCM.
- **Packaging & Distribution:** Steam, Play Store, App Store, itch.io.

Practical:

- Optimize a 3D game scene to run smoothly on mobile.
- Perform profiling and fix bottlenecks.
- Deploy a finished project to at least two platforms (e.g., Android + PC).

Module 6: Capstone Project & Career Preparation

Duration: 4 Weeks

Learning Objectives:

- Build and publish a **complete 2D or 3D game** using all learned concepts.
- Prepare a **professional game developer portfolio** and resume.

Project Ideas:

- **2D Platformer Game:** Multi-level platformer with enemies, power-ups, and scoring.
- **3D Adventure Game:** Terrain, AI, collectibles, quests, and save/load systems.
- **Multiplayer Mini-Game:** Photon Fusion-based lobby + gameplay sync.
- **Simulation Game:** Strategy/tycoon with data-driven gameplay.
- **Mobile Arcade Game:** Lightweight, optimized game published to Play Store.

Career Prep:

- Resume and LinkedIn optimization for Unity developer roles.
- Portfolio creation with playable WebGL builds and GitHub repositories.
- Mock interviews on Unity, C#, game architecture, and optimization.

Deliverables:

- A polished, playable game deployed to at least one platform.
- GitHub repo with clean code, modular structure, and documentation.

📌 Summary Table

Module	Title	Duration	Focus Area
1	C# & Unity Fundamentals	3 weeks	C# scripting, Unity Editor
2	2D Game Development	4 weeks	2D mechanics, UI, gameplay
3	3D Game Development	4 weeks	3D environments, lighting, physics
4	Advanced Gameplay Programming	5 weeks	AI, multiplayer, modular systems
5	Optimization & Deployment	4 weeks	Performance, testing, multi-platform
6	Capstone Project & Career Prep	4 weeks	Real-world game + portfolio

Why Winapps ?

Agile Methodologies

We use Project Management tool like Slack, Trello, Freedcamp for project management and provide update to client on daily basis.

Round the Clock availability

We work 24x7 and work as per client zone and availability.

Industry Experience

Winapps possesses huge experience with different industries like education, E-commerce, banking, tourism, mortgage, real estate, insurance, medical, and health.

Certified Professional

We have experts in-house as Certified Sales force Consultant, Developer, Certified Sales force Administrator, Certified Sales force Developer (PD1), Certified Sales force Developer (PD2), Certified Sales force App Builder, Certified Sales force Sales Cloud Consultant, Certified Sales force Service Cloud Consultant, Certified Sales force Community Cloud, Marketing Cloud Email Specialist, Marketing Cloud Consultant, Pardot Specialist

Trust and Transparency

We have a proven track record of serving 500+ customers with security as a paramount and high touch communication. Extensive experience in end-to-end Implementations, Integrations, Support & Maintenance as Quality Service & Delivery is the primary focus.

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Winapps

Learn. Build. Succeed. Real Skills for Real

Foundation

Here’s how you get started

Skill Development

Deepen your knowledge through structured training,

Lead in the Real World

Apply everything you’ve learned to real scenarios, collaborate, solve problems, and step into the industry with assurance.

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