

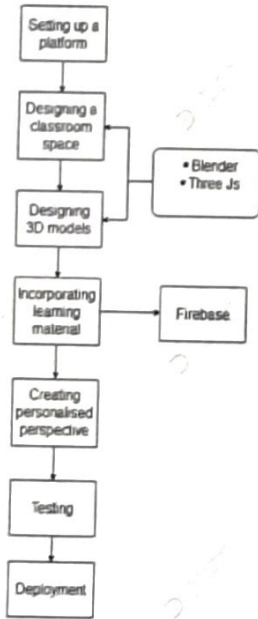
Shri Madhwa Vadiraja Institute of Technology and Management, Bantakal – 574115
Hackothsava 2023 – Synopsis

Team Name:		Team Infinite Loop				
College Name and Address:		Mangalore Institute of technology and Engineering, Moodabidri -574225				
Theme of submission: (check mark the relevant box)		Transformative Education <input checked="" type="checkbox"/>		Sustainable Industrialization <input type="checkbox"/>		
Team Members:		Name	USN	Sem	Mobile no.	email - ID
1	Leader	Gowrish G Kamath	4MT20CS065	6	7337639577	gowrishkamat@gmail.com
2	Member 1	K P Venkatesh	4MT20CS078	6	8494912037	colonelkpunit3112001@gmail.com
3	Member 2	Hegde Sumanth Shyam	4MT20CS073	6	7349376269	hegdesumanth8@gmail.com
4	Member 3	Hency Dsouza	4MT20CS074	6	9901430235	hencyhd39@gmail.com
Project Title:		Wonder Class				
Abstract of the proposed project: (word limit 300)		<p>This project, WonderClass, is mainly aimed at developing a virtual, immersive classroom following the concept of the metaverse. The metaverse is a concept that refers to a virtual world that can be shared by a large number of users in real-time and where users can interact with each other, engage in various activities, and experience a wide range of virtual realities. This concept can become the foundation for developing a real-world experience for learners.</p> <p>Our traditional learning includes a physical classroom and requires our physical presence in the classroom. But the pandemic has transformed our lives and made us adapt to learning through meetings and calls. This project is the next step towards our current learning experience, capable of replacing both actual classrooms and even virtual meetings. WonderClass is an interactive and immersive learning platform fully implemented using 3D libraries and technologies. Using this project, students will be well-equipped with all the learning and development experiences just like in your actual classroom, but at the same time, they will not be missing out on the traditional classroom experience.</p> <p>In this way, we will be able to:</p> <ul style="list-style-type: none"> • Provides a virtual, real-world experience. • Creates a safe and supportive learning environment. • Provides collaborative learning. • Enhances learning with innovations. 				

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		<ul style="list-style-type: none"> • Provides opportunities for personal growth. <p>Initially, WonderClass will be a web-based interactive application providing a 3D platform for both teachers and students. Students can attend classes, participate in group discussions, and collaborate on projects in a virtual environment that replicates the traditional classroom setting. The use of immersive technologies allows for a more engaging and interactive learning experience that can enhance students' understanding of complex concepts and increase their interest in learning. Further, we plan to scale this idea to the next level by integrating AR and VR into this platform for a better experience.</p>				

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Detailed Methodology with proper diagrammatic representation:




1. Research and Requirements Gathering:

Determine the goals and objectives for the online teaching environment and be aware of what the teacher and students' expectations are.
 Choose the best technologies and make sure they fulfil the needs before constructing the virtual classroom.
 Learn about and evaluate the design, development, and testing procedures for creating virtual classrooms.

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		<p>2.Design Create a conceptual design for the virtual classroom that shows the seating arrangement, 3D models of the desks, chairs, and presentation screen, as well as other important details. To design and build the 3D models of the classroom components, use software like Blender. Create a storyboard outlining the PowerPoint presentation's progression and the instructor's explanations.</p> <p>3.Development Create the virtual classroom with three js by incorporating the 3D models of the classroom's components. Create a backend system that allots students seat numbers and enables student interaction throughout the virtual classroom session. Include the PowerPoint presentation in the online classroom setting and make sure the teacher may provide clarifications as needed.</p> <p>4.Testing Test the online classroom to make sure it is up to par and operating as intended. Conduct user testing to gather opinions on the functioning and user experience of the virtual classroom from the students and the teacher. Based on the input, make the necessary adjustments and enhancements.</p> <p>5.Deployment Place the virtual classroom on a website, making sure both students and the teacher can access it. Train the teacher and students on how to use the capabilities of the virtual classroom.</p> <p>6.Maintenance and support</p>				

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		<p>Assure that the virtual classroom is operating effectively and that any problems are quickly fixed by providing ongoing maintenance and support. Follow the most recent developments in the world of virtual classrooms and make any required adjustments to enhance the experience.</p> <p>Preview of the expected final outcome :</p> <ol style="list-style-type: none"> Home page of the website . 				
		<ol style="list-style-type: none"> Virtual Classrooms 				



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Software/ hardware required for the implementation:		Software Requirements HTML, CSS, JS, Firebase, MongoDB, Blender, Three.js. Hardware Requirements Minimum hardware requirement: A PC with dual core processor and 4GB ram, Windows 7 and above.				
Benefit to the society from the project		<ul style="list-style-type: none"> • Virtual reality enhanced website helps students in active engagement • Makes education accessible to physically disabled students • Provides students a classroom like atmosphere and promotes social and cognitive development 				

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		<ul style="list-style-type: none"> • VR can prepare students for the workforce by providing them with simulated professional environments • Virtual simulations, reducing costs while maintaining the quality of the learning experience. 				

Signature of the team leader



Signature of the HoD/ Principal
With seal

Head of the Dept of Comp Sci & Engg
Mangalore Institute of Technology & Engineering
Badaga Mijar, MOODABIDRI 574 225