



FINAL YEAR PROJECT REPORT

VIRTUAL REALITY-BASED CALLING APP

**In fulfillment of the requirement
For degree of
BS (COMPUTER SCIENCE)**

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DECLARATION

We hereby declare that this project report is based on our original work except for citations and quotations, which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other degree or award at Bahria University or other institutions.

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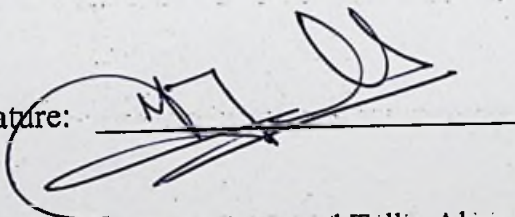
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APPROVAL FOR SUBMISSION

We certify that this project report entitled "VIRTUAL REALITY BASED CALLING APP," prepared by Ali Asghar, M. Anas Shakeel, and M. Hadi Imran, has met the required standard for submission in partial fulfilment of the requirements for the award of Bachelor of Computer Science at Bahria University.

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*Specially dedicated to
our Team which made it possible*

**Ali Asghar
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VIRTUAL REALITY-BASED CALLING APP

ABSTRACT

Virtual reality (VR) is the use of computer modelling and simulation that enables a person to interact with an artificial three-dimensional (3-D) visual or other sensory environments. There are some devices that support Virtual reality like Oculus and Gear VR but the pace of development in the field is rather neglected here so our team proposed an idea to develop a Virtual Reality project. This was a big challenge for our team as we went ahead and took up a challenge to develop a project in the field of VR which is an emerging field in Computer Science and is usually avoided due to a lack of research material available. The objective of this project is to develop a prototype of a Virtual Reality based calling app that a user can explore via Oculus. This report explores all the essential steps that we have used to create a 3D project. Different stages involving creating plain, environment, animation, room, and avatars will be studied and discussed. Finally, the product of the Virtual 3D world can be displayed and explored by a user using hardware known as Oculus.

This project uses the Unity to develop the software. The main advantage of using this software is that it provides build-in packages and plug-in that is suitable for developing a virtual world. There were many versions of unity hub and packages so after keen research about VR we were able to download most suitable packages that can support our project. In initial steps we created an infinite 3D world then we added a plane which shows the amount of area which user can explore out of infinite world. We initialized camera setting, plane colour simple hands scope etc.

After Inserting and initializing all the necessary objects we created an animation for hand like pinch, grab and free hand movement which make our user interactive in Virtual world. We gave movement to our character by which user can roam in the room by using controller joystick. In final stage we connect our unity project with Oculus which allow the user to experience 3D world.

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