VIRTUAL TOUR OF MCA RVCE

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Abstract: In past few years virtual reality has emerged to become the centre of attraction for people. Virtual reality may change the way during which many of the common things are getting used today like it's already changed the gaming world by introducing virtual games. It provides an environment that's somehow look alike that it's real-world or we will say computer game provides a simulated real-world environment to its users. It is very popular technology in the field of gaming, but in this project, we will focus on how virtual reality can be beneficial for campus touring of MCA Department-RVCE in particular, it can bring the feeling of reality and immersion to the user as if they are traveling in actual, but in reality, they are only experiencing the tour through VR headset. A headset itself helps to provide the 3D look, it can help people to have exhilarating experience without visiting that place in real and it can greatly influence the visitors due to its interactive nature.The sequence of the work will be carried out by stitching the normal images to get the panoramic images using Insta360 software and importing the panoramic images to the unity assets,then Importing the several packages required for Virtual reality to the unity assets and finally coding the required functions using C# language.The main aim of the project is to mimic real world by computer generated environment and engage all the sense of people using very powerful and compelling technology that is Virtual Reality. We hope that users can explore the infrastructure and facilities provided in the department of MCA RVCE with the user friendly interface which is also the expected improvement to an existing system.

Key Words: Virtual Reality (VR), Virtual tour, RVCE.

I. INTRODUCTION

The virtual interactive tour which is basically a 360 view of mca department rvce. A virtual tour is that the simulation of an existing location with the assistance of sequential still images. They help in recreating a sensible representation of reality. Virtual tours help in presenting views to inaccessible areas and supply a stimulating and excellent alternative to fieldwork when expenses, time or logistics are a problem for people. While academics is that the most vital aspect to picking a university , campus life isn't too far behind. Students can explore and learn about the mca department apart from others. When they are in the final decision making process, it may just be the details that makes mca department rvce memorable enough to make the final cut. A virtual tour allows parents to see the laboratories their children will experiment in, and the facilities they will learn in. A virtual tour helps freshman start to visualize themselves as a part of mca department. The purpose of this project is a virtual tour makes user to view rvce mca department from anywhere. Unfortunately, it isn't always possible or practical for parents or students to visit campus physically due to location, transportation, time and resource restrictions. The tour would be accessible from any appropriate device. Using their devices students or users can navigate through different prominent entities of mca department to learn more about the department environment. Visitors would have flexibility to roam virtually in campus and to go to any destination just by using directions for which no special skill set is required. There are several advantages of our virtual tour: Each and every distinct areas of mca department rvce is described by a small pop-up showing information about that area. The viewer can view the virtual scene in the least directions.

VIRTUAL REALITY IN DEPARTMENT TOUR

Virtual reality is a term that refers to interactive images or films that allow the spectator to explore a scene in 360 degrees. Unlike a traditional video image, which is filmed from a single point of view, VR production covers every aspect of a site.Tourism places may be captured in a new and immersive way using virtual reality.This is accomplished with the help of specialised cameras, rigs, and software. After there, the information can be viewed via a VR headset, a standard PC, or a mobile device. Many people believe that virtual reality content can only be watched with a dedicated VR headset, however this is not the case. Although viewing VR in this manner provides a more immersive experience, it can also be viewed on any platform, including mobile phones.You can view the video in 360 degrees by clicking or swiping over it.

VIRTUAL REALITY IN UNITY

Unity VR allows you to target virtual reality devices in your projects without having to use any external plugins. It includes a base API and feature set that is compatible with a variety of devices. It was created with the goal of providing backward compatibility with future devices and software. By design, the VR API surface is small, but it will grow as VR becomes more popular.Open the Player Settings (menu: Edit > Project Settings > Player) to enable VR for your game builds and editor. Check the Virtual Reality Supported option under Other Settings. This should be set for each build target. When you enable virtual reality support in a standalone build, you won't get Android support (or vice versa).To add and delete Virtual Reality Devices for each development target, use the Virtual Reality SDK list presented below the checkbox. Unity will try to enable VR Devices in the order listed in the list during runtime. The enabled device will be the first to properly initialise. In the created player, the list order will be the same.

II. LITERATURE SURVEY

In [1] Prasetya, D. D., Widiyaningtyas, T., & Wibawa, A. P. ,portrays the development of an immersive panoramic 360° virtual tour application using the image matching approach is proposed in the Design of Immersive Virtual Tour Application Based on Geospatial Analysis. The Google Map API is also integrated into this web-based application to give adaptive geographic mapping assistance. The results of the tests suggest that the application can run smoothly and without errors.Tourism is a complex set of industries that includes a wide range of businesses, organisations, and government agencies that collaborate at various levels to provide additional value to each other. Tourism is a massive business that plays a critical role in local and national economic growth. The natural environment-based sector is rapidly expanding around the world.

In [2] Maach, A. Azough, and M. Meknassi, portrays Development of a virtual reality use case for visiting a historical landmark. It details the work that went into developing a virtual reality use case for an interactive and multi-platform visit to a historical site in Fez. This project's purpose is to create 360-degree virtual tours of notable or inaccessible areas like Moulay Idriss' mausoleum..to enable a virtual visit of monuments or significant locations across a variety of platforms, such as websites or smartphone apps, using virtual reality headsets and Bluetooth controllers, and to provide users with an immersive experience in those locations by using virtual reality headsets and Bluetooth controllers.They'll be able to navigate and engage with these environments if they have this ability.

.In [3] Dai, M., Zhou, D., Shi, B., Wang, M., Zhang, L., and Gu, C., portrays Virtual Tourist Guide Training System based on virtual reality technology is the subject of research. analysed the standard simulated guide training system's maintenance issues and shortcomings, explained how to construct a tourist guide training system using Virtual Reality, multi-channel projection, and other technology, and introduced the virtual tourist guide training system's developing technology and procedure.This approach would, to a significant extent, break the time and space constraints of practical teaching, enhance teaching efficiency, reduce student management risk, and minimise real-world teaching costs.Using Virtual Reality, multi-channel projecting, microteaching, and other technology to create a tourist guide training platform in order to solve the problem of traditional simulated tourist guide system maintenance and, as a result, improve the effectiveness and efficiency of tourist guide training courses.

In [4] L. Zhou and Q. Lin, eds., The impact of virtual tours on destination images. to review previous research and discuss how the virtual tour experience affects travellers' opinions of a destination Propositions are being developed to emphasise the importance of the virtual tour.Response time, ease of use, content, and tourist understanding all have a good impact on the destination image during the virtual tour, whereas previous identical virtual experiences have a negative impact.Virtual reality is well-known and is being studied for use in a variety of industries. For example, a virtual reality-based relax/refresh system could be useful in urban planning.

In [5] L. Malomo, F. Banterle, P. Pingi, F. Gabellone, R. Scopigno, F., portrays An interactive system for exploring Cultural Heritage locations. We recommend VirtualTour as a service. This is a virtual reality app for Apple iOS 8 (tablets, smartphones) that allows users to visit Cultural Heritage sites that have been collected using 3D scanning technology in a natural and easy way. or created by artists. By utilising modern mobile devices (tablets or phones) and their embedded sensors, VirtualTour proposes a fresh technique for experiencing virtual places.The view is rotated in accordance with the rotation of the mobile device (again, utilising the device sensors). The major goal of this programme is to enable mobile access to hidden or inaccessible sites (such as caves, temples, and structures) by employing 3D representation and removing the usability barrier that often prevents navigation in complicated models on mobile devices.

In [6] T. Kusu, Y. Ito, T. Kida, T. Shimada, T. Takahashi, M. Nomoto, Y. Kato, portrays On the Robot Service Network Protocol, a Virtual Campus Tour Service Using Remote Control Robots is being developed. We introduce a virtual campus tour service that allows consumers to control robots on school campuses through the Internet. The Robot Service Network Protocol (RSNP) is a well-known protocol specification that we employ. As a result, customers can utilise the proposed service to control multiple distant robots on various campuses. We do subjective and objective evaluations of camera functionalities for the service, as well as verify the efficacy of the offered one. ROCS is a technology that allows distant users to control robots on school campuses and includes functionalities that allow them to take a virtual tour of the site.

In [7] Yueh, Y. T. F., Chiu, D. K. W., Leung, H., and Hung, P. C. K., portrays A Semantic Web Service-Based Design and Implementation of a Virtual Travel Agent System for M-Tourism. On the basis of these technologies, we propose the establishment of a Virtual Travel Agent System (VTAS). We propose a scalable, adaptive, and intelligent MAIS architecture for VTAS based on a case study of a large service-oriented travel agency. with agent clusters in this work. To meet the aims of the primary processes of a tourist's trip, agent clusters may contain different sorts of agents.demonstrate how agents might use ontology from the semantic web to assist travellers in better planning, understanding, and specifying their needs. We go on to show how Web service technologies can be used to successfully combine diverse Internet tourist resources.

In [8] De Farias, I., Leitao, N., & Teixeira, M. M. portrays A touristic virtual guide. The goal of this project is to identify the most important computing needs in order to support the improvement of tourist points of promotion for travellers through the use of a mobile application proposal. We used a literature review as the study methodology to do this. the Urbis prototype's proposal, an app that tries to assist travellers get a better understanding of the cities they're visiting, even if they don't speak the language.Tourist activity creates a large amount of data that is valuable and crucial in the tourism industry. This indicates that information should be considered as part of an organization's overall strategy.

In [9] T. Jung, M. C. Tom Dieck, N. Moorhouse, and D. Tom Dieck portrays Virtual Reality applications as seen through the eyes of tourists. Investigate tourists' VR experiences using the Lake District National Park as a case study. 35 VR tests and conversations with tourists were analysed using thematic analysis. Tourists were thoroughly engrossed in the experience, which appeared to impact their behavioural intention to visit the place, indicating a favourable attitude toward the usage of VR in the tourism context. The Lake District National Park Authority and Lakes Alive in the United Kingdom agreed to create a virtual reality application to improve the tourist experience and attract new visitors to the Lake District. However, it is critical to thoroughly comprehend the user experience in order to properly comprehend tourists' behavioural intentions to visit a destination based on the experience VR application.

 According[10] Tour Guide Online Independent Learning Study from the Virtual Community Perspective, Liu, Y., Xie, X., Lv, J., & Jie, X. The ability of virtual reality to provide virtual experiences that tourists may accept as a substitute for genuine visits to threatened areas gives it the potential to be employed as a preservation tool.. However, a tourist's beliefs toward authenticity, as well as his or her goals and limits, will determine whether such alternatives are acceptable. As virtual reality becomes more integrated into the tourism industry, new questions arise

III. PROPOSED SYSTEM

The existing campus tour is not compatible with all mobile devices, it does not have a user-friendly interface. These problems have been overcome in the proposed system 'Virtual tour of MCA Department RVCE' by developing an interesting user interface that guides the users well. Virtual box makes the system more user interactive. It gives the experience as if the users are physically present inside the department of MCA RVCE.The objectives of the project are as follows: The main objective of this project is to provide an experience for the viewers to feel insights of MCA Dept. To provide users an interactive tour. To show the effectiveness of using these technologies. Virtual walks are motion picture documentaries shot in real time as they travel through a department. Without the use of VR glasses or goggles, the audience can experience the sights and sounds as if they were actually travelling through that region.When it comes to MCA Department projects, using a virtual self-tour to college can help you reach out to more faculty and students. These images are more enticing and detailed than the property sketches. That is why reputable virtual tour developers incorporate it into their presentations to add finer details and make them more impactful.You can also show 360 panoramic virtual tours to potential students to give them a better idea of how the location looks overall. Customers will feel valued if you provide personalised services, and they may choose to deal with you over your competition.You can show all forms of information about the MCA Department RVCE through a virtual tour. These presentations have a lot of visual appeal and give you a good picture of what the MCA Department is all about. Students are also interested in learning about the amenities, features, classrooms, labs, and other components of a department when using this 3D depiction. As a result, by providing detailed visual information the user makes use of audio voice which is used in the project .By listening to audio voice user can easily move forward in the department and can see the facilities provided in MCA department RVCE.

IV.   METHODOLOGY

The sequence of the work will be carried out by stitching the normal images to get the panoramic images using Insta360 software and importing the panoramic images to the unity assets, then Importing the several packages required for Virtual reality to the unity assets and finally coding the required functions using C# language. additional features like providing audio voice using source editor and by stitching audio files for each direction arrow placed on project.. Then finally by clicking the arrow both the function can be operated at a time it can show the direction as well audio voice will be played. so it is easy for the user to understand, move forward and see the department. design strategies for 360° immersive video applications At the MCA department RVCE, an application was produced as an immersive interactive virtual tour using the design methodology provided.

The proposed AR application consists of three phases:

- ✓ User: First user clicks on an arrow placed on images and within the arrow itself audio voice also implemented so it will guide the user to move around next images so it will easily see the entire department easily.
- ✓ Between the user and virtual content there will be interaction like visualizing images
- ✓ virtual content and audio content:virtual content means normal images to get panoramic images using autostitch software.importing the panoramic images to the unity assets.
- ✓ Audio content:audio content means first from the source code editor we have to import the audio file and it will be played.when the arrow is clicked.
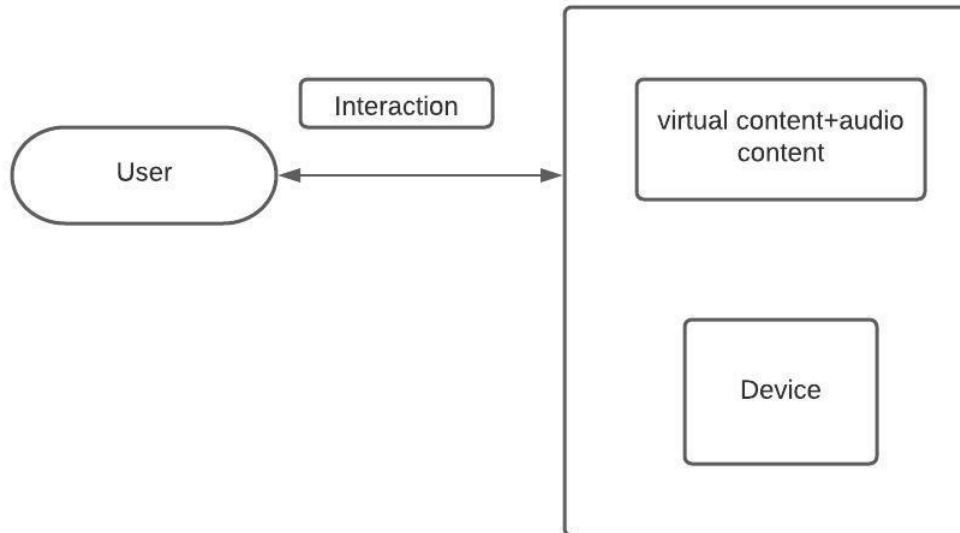- ✓ Device:Device is used for virtually seeing the MCA department RVCE using mobile phones and google glass.

Fig 4.1 block diagram

The figure:4.1 shows the block diagram of the proposed system. It shows the main functionalities of the proposed system. All desired activities of the system are proposed in the above diagram. Block diagram will give the components of the designed application including software and hardware components.

V.   RESULTS

The results can be addressed in the screenshots.once the user clicks on the images of the department , an arrow placed on every images.once the user clicks on the arrow it will take user to next image and user virtually can see department and facilities provided in the MCA department RVCE The audio voice also included along with arrow see in the fig5.1 which helps user to understand the direction provided.

Fig5.1 A Overview of MCA Department RVCE

Fig 5.2 Entrance of MCA Department RVCE

VI. CONCLUSION

The task that we created is a virtual reality in unity. The main purpose is to virtually see MCA department RVCE which helps the student,and parents, how MCA department looks like, what are facilities provided, how are the classrooms and labs and other facilities provided in MCA department RVCE. most probably audio voice included which is more useful for user to guide instructions for virtual tour of MCA department RVCE .VR can be will fundamentally change the way in which virtual tour' experiences and requirements are managed entirely grow exponentially.Virtual tours are not a replacement for the real experience, but they can aid in recreating it if the user has already visited the location, highlighting different aspects of their visit.Virtual tours are an indisputable resource for saving time and money, creating vivid aesthetic experiences, and making travel more inclusive.

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