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**Proposal**

**For**

**Second Year Project**

**Bachelor of Science in Information Technology**

Project Name

**Tic tac toe game**

**Submitted by**

**Gyeltshen Wangdi (12190053)**

**Member2(Student number)**

**Member3(Student number)**

**…**

**…**

**Gyalpozhing College of Information Technology**

**Read carefully before filling the form.**

1. Please do not alter the layout of the application form. Information must be filled in the spaces provided, under set format.
2. Guidance notes in various fields should not be deleted.
3. Required information should be duly filled in the specified fields.
4. Required heads/fields which are not relevant to the project should be marked **N/A** (Not Applicable) or left blank and should not be deleted.

**Guidelines and Forms**

**Submission Procedure**

Duly filled proposal forms completed in all respects should be submitted in form of soft copy and a hard copy to project guide and project coordinator. On receipt of the applications the proposals will be evaluated by reviewer panel and proposal would then be defended by student groups. The project group may need to revise the proposal in light of the evaluator’s recommendations.

**For further information, please contact:**

Project Coordinator

Jigme Wangmo

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**Note:** To update the table of contents, right click in the table and select ‘*update field*’ and then select ‘Update Entire Table’.

**Application for Final Year Project**

# 1. Project Identification

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| --- | --- | --- | --- |
| Reference Number: | | | |
| (for office use only) | | | |
| Project Title: | | | |
|  | | | |
| Project Internal Guide: | | | |
| Name: |  | | |
| Designation: |  | | |
| Organization: |  | | |
| Mobile # : |  | Tel. # : |  |
| Email: |  | | |
| **C1. Project External Guide:** | | | |
| Name: | **NA** | | |
| Designation: |  | | |
| Organization: |  | | |
| Mobile # : |  | Tel. # : |  |
| Email: |  | | |
| **C2. Student Group Lead:** | | | |
| Name: |  | | |
| Roll No: |  | | |
| Department: |  | | |
| Mobile # : |  | Tel. # : |  |
| Email: |  | | |

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| Organizations Involved in the Project: *(Please identify all affiliated organizations collaborating in the project, and describe their role/contribution to the project.)* | | | |
| **D1. Industrial Organizations:** | | | |
| *#* | *Organization Name* | | *Role / Contribution* |
|  | *NA* | |  |
| **D2. Academic Organizations:** | | | |
| *#* | *Organization Name* | *Role / Contribution* | |
|  |  |  | |
| **D3. Funding Organizations:** | | | |
| *#* | *Organization Name* | | *Role / Contribution* |
|  | *NA* | |  |
| Key Words: *(Please provide a maximum of 5 key words that describe the project. The key words will be incorporate in our database.)* | | | |
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| Research and Development Theme:To develop an android application, where the user can get a platform to entertain by playing game, which will enhance the logical thinking of a user. | | | |
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| Project Status: (Please mark ☑)  q New ☑ Modification to previous Project  ☑ Extension of existing project | | | |

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| Project Duration: | | |
| Expected Starting Date: |  | |
| Planned Duration in months: |  | |
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# 2. Scope, Introduction and Background of the Project

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| Scope of the Project:System scopeThe scope of the project is limited to the (GCIT) students.I am going to developed a simple android base game with the following features:Start: It is use to start the applicationRestart: it is the process where the user or player can restart their game play after completion of the game.Exit: it is the process where the user can close the application after enjoying the game.User scope:My application is limited to ( GCIT) students. |
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| Introduction (Project Background and Literature Review, Current State of the Art): *(Detailed summary of what all has been done internationally in the proposed area quoting references and bibliography. Please note that this section demonstrates the depth of knowledge of the project team and builds the confidence of the evaluators about capability of the team in achieving the stated objectives.)*  *(Please describe the current state of the art specific to this research topic.)*  Tic-tac-toe originated from the ancient Roman Empire around the first century BCE, and it was called Terni Lapilli. The rule of the game differs as each player only had three pieces, moving around the empty space to keep playing First print reference of the game appears in Britain with the name “Nougats and Crosses” in 1864. The name “tic tac toe” is renamed from “Nougats and Crosses” in the 20th century USA, and is the earliest known game to display visuals on a video monitor. Although Tic tac toe appear simplistic to play. It contains 138 terminal board position and 255,168 possible ways these terminal board position is obtained.  Tic-tac-toe is a two player game that takes turn making spaces on a 3 by 3 grid, and the objectives of the game is to place three connecting marks in a horizontal, vertical, or diagonal row. There are "Tic Tac Toe Panels" that can be easily found in children's playground or park all over the globe. Tic-tac-toe is one of the first game to be played by children due to its fast setup and easy engagement. It helps children apply their logic and develop strategy at an early age. It prepares children for more complex game because they have to think of the multiple things at one time. Tic tac toe helps develop coordination fine motor skills and visual skills. It helps children to learn how to follow rules and take turns.  **Literature Review:**    According to (Australian Mathematics Teacher,2008) state that, doing mathematics, and thinking about how you are doing it at the same time, are not the easiest things to do. It is even more difficult if students are not aware that they should be attempting both processes at the same time. They are likely to concentrate on the immediate task of "doing" the mathematics, rather than trying to access the deeper process. Yet it is this deeper process that is really at the heart of mathematics. In turn, accessing this deeper process requires in part some command of the appropriate rational/logical language so communication with yourself and others can proceed effectively and efficiently. This article discusses the possibilities of using students' explorations of the traditional strategy game "tic-tac-toe," and some extensions, to set up situations for students to discuss and examine this process. |

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| Challenges: *(Please describe the challenges, specific to this research topic, currently being faced internationally.)*  1: The feature that I have included may not be fulfilled as per the requirement of the user:  2: As a being an amateur developer I may not be successful to complete the project. |
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| Motivation and Need: *(Please describe the motivation and need for this work.)*  Usually Tic-tac- toe game is played in pair on the paper, where the two players, *X* and *O*, who take turns marking the spaces in a 3×3 grid. The player who succeeds in placing three of their marks in a diagonal, horizontal, or vertical row is the winner. It is a solved game with a forced draw assuming best player from both players. Its motivated me to develop an application, where the every players can play through their device rather than scratching on paper or a books. |
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# 3. Aim and Objectives of the Project

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| *(Please write the actual aim of your project. Also, describe the measurable objectives of the project and define the expected results. Use results-oriented wording with verbs such as ‘to develop.’, ‘to implement.’, ‘to research.’, ‘to determine.‘, ‘to identify..’ The objectives should not be statements and should not include explanations and benefits. The objective should actually specify in simple words what the project team intends to achieve (something concrete and measurable/ deliverable). Fill only those objectives that are applicable to the proposed project.)* |
| **AIM:**  The aim of the project is to develop an application that can help a student to improve their mental power.    **OBJECTIVES:**  1.To entertain a student to develop their logical Stagey in terms of winning the game  2. To enhance student logical Stagey |
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# 4. Methodology

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| Development / Research / Test Methodology: *(Please describe the technical details and justification of your development and research plan and test plan and testing strategies. Identify specialized equipment, facilities and infrastructure which are required for the project and their utilization plan. The block diagrams, system flow charts, high level algorithm details etc. have to be provided in this section. Also, describe the overall methodology to be used for the particular research topic)*  **Problem statement**  While in olden time the tic tac toe game is played on a paper with the help of pen or a pencil, drawing 3 by 3 grid. However, it is difficult to carry every time books and pen to play a game, therefore to make much more portable android application is developed, where the player need not have to draw a grid.  **Planning:** in this phase all the requirement and the information about the project is gathered.  Requirement gathering and analysis: in this phase requirement of the project is collected form the various resources and analyses and understand detail about the project.  **Design:** in this phase prototype of the project is prepared from the requirement that is been collected.  Coding / implementation: After the design phase, implementation part of project is started, according the ER diagram.  Testing: After the coding, each functionalities is tested with the process of testing method.  **Documentation:**  Simultaneously documentation is prepared for the project.  **Methodology:** since I have decided to use an agile model, as it is used for developing a small project, reduce risk and help in detecting errors.  It is the combination of iterative and incremental process model, and the advantage of using the agile model is that in each iteration there is a production of a software. |
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| Project Team: | |
| ***Title / Position*** | ***Number*** |
| Project Internal Guide |  |
| Project External Guide |  |
| Student Team Members |  |
| Others (please specify) |  |
| Add more rows if required |  |

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| Project Activities: *(Please list and describe the main project activities, including those associated with the transfer of the research results to customers/beneficiaries. The timing and duration of research activities are to be shown in the Gantt chart in Section 8.)*   * + - 1. Installation of the software and tools: installation of the android studio, JDK.       2. Resource gathering: Video tutorials, online referencing related to app development.       3. Designing phase: it includes designing of user interface and features of the application.       4. Development: in this phase development of a feature is started.       5. Testing: development of the product is tested for the functionalities to ensure the product is free of bugs.       6. Final documentation: after all the phase are done I will document about the project. |
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| Key Milestones and Deliverables: *(Please list and describe the principal milestones and associated deliverables of the project. A key milestone is reached when a significant phase in the project is concluded, e.g. selection and simulation of algorithms, completion of architectural design and design documents, commissioning of equipment, completion of test, etc.) The timing of milestones is also to be shown in the Gantt chart in Section 8.* | | | |
|  | | | |
| *No.* | *Elapsed time from start (in months) of the project* | *Milestone* | *Deliverables* |
| 1 | *3/3/2021* | Project topic selection | Topic selection |
| 2 | 4/3/2021-8/3/2021 | Brainstorming about topic | Gathering information about project . |
| 3 | 13/3/2021 | Submission of proposal | project proposal |
| 4 | 15/3/2021 | Requirement gathering | Software requirement gathering |
| 5 | 16/3/2021-17/3/2021 | System design | Coding and feature implementation |
| 6 | 22/3/201-25/3/2021 | System testing | Test case |
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| (Please add more rows if required.) | | | |

# 5. Benefits of the Project (Expected output/outcomes):

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| 1.To entertain the user.   * Since I am developing a gamming application, after playing a tic tac toe game I will make sure that user will be entertain with the gamming feature.   2.Increase logical thinking power of the user.   * This application need to use logical strategy to win the game, therefore after using this application it will ensure that, logical thinking power of a user will get increased. |
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# 6. Risk Analysis/Feasibility

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| Risks of the Project: (Please describe the factors that may cause delays in, or prevent implementation of, the project as proposed above; estimate the degree of risk.)  (Please mark ☑ where applicable) Low Medium High  Technical risk  Timing risk  Budget risk |
| A1. Comments(Describe the risk): |
| **Technical Risk:**  The minimum requirement of a software that is used to develop an application requires (8GB) RAM, since I don’t have a good laptop to develop an application, the system might get crash, which would be challenging for me. |
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# 7. Project Approval Certificate

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| *(Approval of Project Proposal by the Competent Authority (Department Chairman) and Project Review Team is mandatory before the start of project execution****.****)*  ***Project Review Team:***  Sl # Name Signature                  (Please add more rows if required.)  ***Project Coordinator***  Name:  Designation:  Email:  Date: Signature:  ***Competent Authority – Head of Department***  Name:  Designation:  Email:  Date: Signature  & stamp: |

# 8. Reviewers Panel Comments

# 10. Project Schedule / Milestone Chart /Work plan

*(Project schedule using MS-Project (or similar tools) with all tasks, deliverables, milestones, clearly indicated are preferred. Task should be measured in terms of hours)*

# 13. Report Writing Guidelines

*(Project report will be written under the specified guidelines.)*

# Bibliography

Origin of tic tac toe. (n.d.). Retrieved March 14, 2021, from https://www.sweetoothdesign.com/games-tic-tac-toe

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