# DEVELOPMENT OF CODENECT: VISUAL PROGRAMMING SOFTWARE

# FOR LEARNING FUNDAMENTALS OF PROGRAMMING

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Bachelor of Science in Information Technology

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**APPROVAL SHEET DITO**

**LEAVE THIS EMPTY FOR THE MOMENT**

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He obtained his degree in 2021.

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**ABSTRACT**

**LIM-IT, BRANDON B. and PUNAY, JAYKEL O. DEVELOPMENT OF CODENECT: VISUAL PROGRAMMING SOFTWARE FOR LEARNING FUNDAMENTALS OF PROGRAMMING**. Undergraduate Thesis. Bachelor of Science in Information Technology. Cavite State University, Indang, Cavite. May 2021. Adviser: Prof. James Angelo V. Aves

The study was conducted from of January 2020 to June 2021 at Cavite State University, Indang, Cavite. The study was designed for aiding beginners in the field of programming to get a better grasp and understanding about its fundamentals. The study provided solution for helping beginners at programming improve their programming knowledge and understanding by providing an alternative approach to traditional text-based programming through visual programming. The software is composed of seven modules which are the input/output, visual nodes, transpiler, filesystem, simulation, debug, and assessment modules. The data were gathered through conducted survey and assessment using online Google Form from 12 students with programming subjects and courses.

The software was developed using the C++, GLFW and OpenGL, DearImGui and ImNodes, and TinyC following the V-Model as methodology.

The software was evaluated for its functionality, reliability, usability, maintainability, efficiency, and portability using the ISO 9126 standards. The software passed the criteria for evaluation and met all the requirements and objectives having an overall mean of 4.50 with a descriptive rating of “Excellent” based on the software evaluation participated in by 22 evaluators. Overall, the result and feedback show positive effect in both the interest and usage of the respondents.

**TABLE OF CONTENTS**

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | Page |
| **BIOGRAPHICAL DATA** … … … … … … … … … … … … … … … ... | |  | iii |
| **ACKNOWLEDGMENT** … … … … … … … … … … … … … … … … | |  | v |
| **ABSTRACT** … … … … … … … … … … … … … … … … … … … … | |  | vii |
| **LIST OF TABLES** … … … … … … … … … … … … … … … … | |  | x |
| **LIST OF FIGURES** … … … … … … … … … … … … … … … … | |  | xi |
| **LIST OF APPENDIX TABLES** … … … … … … … … … … … … … | |  | xiii |
| **LIST OF APPENDIX FIGURES** … … … … … … … … … … … … … | |  | xiv |
| **LIST OF OTHER APPENDICES** … … … … … … … … … … … … … | |  | xvi |
| **INTRODUCTION** … … … … … … … … … … … … … … … … | |  | 1 |
|  | Statement of the Problem … … … … … … … … … … … … … |  | 3 |
|  | Objectives of the Study … … … … … … … … … … … … … … |  | 4 |
|  | Significance of the Study … … … … … … … … … … … … … |  | 5 |
|  | Time and Place of the Study … … … … … … … … … … … … |  | 6 |
|  | Scope and Limitations of the Study … … … … … … … … … … |  | 6 |
|  | Definition of Terms … … … … … … … … … … … … … … … |  | 10 |
|  | Conceptual Framework of the Study … … … … … … … … … |  | 12 |
| **REVIEW OF THE RELATED LITERATURE** … … … … … … … … … | |  | 14 |
| **METHODOLOGY** … … … … … … … … … … … … … … … … | |  | 37 |
| **RESULTS AND DISCUSSION** … … … … … … … … … … … … … | |  | 44 |
|  | System Overview … … … … … … … … … … … … … … … … |  | 45 |
|  | System Evaluation … … … … … … … … … … … … … … … |  | 60 |
| **SUMMARY, CONCLUSION, AND RECOMMENDATION** … … … … | |  | 67 |
|  | Summary … … … … … … … … … … … … … … … … … … |  | 67 |
|  | Conclusions … … … … … … … … … … … … … … … … … |  | 68 |
|  | Recommendation … … … … … … … … … … … … … … … |  | 69 |
| **REFERENCES** … … … … … … … … … … … … … … … … … … | |  | 70 |
| **APPENDICES** … … … … … … … … … … … … … … … … … … … | |  | 73 |

**LIST OF TABLES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Table** |  |  |  | **Page** |
| 1 |  | Pre-Assessment Result … … … … … … … … … … … … |  | 39 |
| 2 |  | Interpretation of Pre-Assessment Result … … … … … … |  | 39 |
| 3 |  | Likert Scale used in software evaluation … … … … … … |  | 41 |
| 4 |  | Post-Assessment Result … … … … … … … … … … … |  | 42 |
| 5 |  | Interpretation of Post-Assessment Result … … … … … |  | 42 |
| 6 |  | Comparison of the results of pre-assessment and post  assessment … … … … … … … … … … … … … … |  | 43 |
| 7 |  | Mean score for the functionality of the system (Technical) ... |  | 73 |
| 8 |  | Mean score for the reliability of the system (Technical) … … |  | 74 |
| 9 |  | Mean score for the usability of the system (Technical) … … |  | 74 |
| 10 |  | Mean score for the efficiency of the system (Technical) … .. |  | 75 |
| 11 |  | Mean score for the maintainability of the system (Technical) |  | 75 |
| 12 |  | Mean score for the portability of the system (Technical) … .. |  | 76 |
| 13 |  | Mean score for the user-friendliness of the system  (Technical) … … … … … … … … … … … … … … … |  | 76 |
| 14 |  | Overall technical evaluation assessment of the software  (Technical) … … … … … … … … … … … … … … … |  | 77 |
| 15 |  | Mean score for the functionality of the system (Non-  Technical) … … … … … … … … … … … … … … … |  | 78 |
| 16 |  | Mean score for the reliability of the system (Non-Technical) |  | 78 |
| 17 |  | Mean score for the usability of the system (Non-Technical) |  | 78 |
| 18 |  | Mean Score for the User-Friendliness of the System (Non-  Technical) … … … … … … … … … … … … … … … |  | 79 |
| 19 |  | Overall technical evaluation assessment of the software  (Non-Technical) … … … … … … … … … … … … … |  | 79 |

**LIST OF FIGURES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Figure** |  |  |  | **Page** |
| 1 |  | Conceptual Framework of proposed CodeNect: Visual  Programming Software for Learning Fundamentals of Programming … … … … … … … … … … … … … |  | 13 |
| 2 |  | V-Model … … … … … … … … … … … … … … … … … |  | 25 |
| 3 |  | Logo of CodeNect … … … … … … … … … … … … … … |  | 45 |
| 4 |  | Screenshot of home screen of CodeNect … … … … … … |  | 46 |
| 5 |  | Screenshot of tutorial prompt of CodeNect … … … … … |  | 46 |
| 6 |  | Screenshot of tutorial of CodeNect … … … … … … … … |  | 47 |
| 7 |  | Screenshot of sample tutorial of CodeNect … … … … … |  | 47 |
| 8 |  | Screenshot of node interface of CodeNect … … … … … |  | 48 |
| 9 |  | Screenshot of node interface context menu in CodeNect … |  | 48 |
| 10 |  | Screenshot of node creation sample in CodeNect … … … |  | 49 |
| 11 |  | Screenshot of warning notification in CodeNect … … … … |  | 49 |
| 12 |  | Screenshot of sidebar menu in CodeNect … … … … … … |  | 50 |
| 13 |  | Screenshot of new project dialog in CodeNect … … … … |  | 51 |
| 14 |  | Screenshot of terminal and debug in CodeNect … … … … |  | 51 |
| 15 |  | Screenshot of transpiled code tab in Terminal … … … … |  | 52 |
| 16 |  | Screenshot of running transpiled code … … … … … … … |  | 53 |
| 17 |  | Screenshot of inspector in CodeNect … … … … … … … |  | 53 |
| 18 |  | Screenshot of Docs in CodeNect … … … … … … … … … |  | 54 |
| 19 |  | Screenshot of sample Docs in CodeNect … … … … … … |  | 54 |
| 20 |  | Screenshot of Assessments in CodeNect … … … … … … |  | 55 |
| 21 |  | Screenshot of sample assessment in CodeNect … … … |  | 55 |
| 22 |  | Screenshot of sample assessment output in CodeNect … |  | 56 |
| 23 |  | Screenshot of settings menu in CodeNect … … … … … … |  | 57 |
| 24 |  | Screenshot of About Window in CodeNect … … … … … |  | 57 |
| 25 |  | Screenshot of keyboard shortcuts help in CodeNect … … |  | 58 |
| 26 |  | Screenshot of Dictionary Help in CodeNect … … … … |  | 59 |
| 27 |  | Screenshot of Libraries and Contacts Help in CodeNect … |  | 59 |

**LIST OF APPENDIX TABLES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Appendix Table** |  |  |  | **Page** |
| 1 |  | Frequency distribution of scores on functionality  (Technical) … … … … … … … … … … … … |  | 88 |
| 2 |  | Frequency distribution of scores on reliability  (Technical) … … … … … … … … … … … … |  | 88 |
| 3 |  | Frequency distribution of scores on usability  (Technical) … … … … … … … … … … … … |  | 88 |
| 4 |  | Frequency distribution of scores on efficiency  (Technical) … … … … … … … … … … … … |  | 89 |
| 5 |  | Frequency distribution of scores on maintainability  (Technical) … … … … … … … … … … … … |  | 89 |
| 6 |  | Frequency distribution of scores on portability  (Technical) … … … … … … … … … … … … |  | 89 |
| 7 |  | Frequency distribution of scores on user-friendliness  (Technical) … … … … … … … … … … … … |  | 90 |
| 8 |  | Frequency distribution of scores on functionality (Non-  Technical) … … … … … … … … … … … … |  | 90 |
| 9 |  | Frequency distribution of scores on reliability (Non-  Technical) … … … … … … … … … … … … |  | 90 |
| 10 |  | Frequency distribution of scores on usability (Non-  Technical) … … … … … … … … … … … … |  | 91 |
| 11 |  | Frequency distribution of scores on user-friendliness  (Non-Technical) … … … … … … … … … … … |  | 91 |
| 12 |  | Profile of the technical respondents … … … … … … |  | 92 |
| 13 |  | Profile of the non-technical respondents … … … … |  | 93 |

**LIST OF APPENDIX FIGURES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Figure** |  |  |  | **Page** |
| 1 |  | Graphical representation of the course and strand of the  respondents … … … … … … … … … … … … … |  | 95 |
| 2 |  | Graphical representation of the grade/year level of the  respondents … … … … … … … … … … … … |  | 95 |
| 3 |  | Graphical representation of the desired technology field  of the respondents … … … … … … … … … … … |  | 96 |
| 4 |  | Graphical representation of knowing programming pre-  college of the respondents … … … … … … … … |  | 96 |
| 5 |  | Graphical representation of the years programming of  the respondents … … … … … … … … … … … … |  | 97 |
| 6 |  | Graphical representation of the languages comfortable  with of the respondents … … … … … … … … … |  | 97 |
| 7 |  | Graphical representation of the best learning method of  the respondents … … … … … … … … … … … … |  | 98 |
| 8 |  | Graphical representation of the hard to learn in  programming of the respondents … … … … … … |  | 98 |
| 9 |  | Graphical representation of the text-editing tool used of  the respondents … … … … … … … … … … … … |  | 99 |
| 10 |  | Graphical representation of the preferred alternative  learning method of the respondents … … … … … |  | 99 |
| 11 |  | Graphical representation of the text editors’ usage ease  of the respondents … … … … … … … … … … … |  | 100 |
| 12 |  | Graphical representation of the programming  fundamentals understanding of the respondents … |  | 100 |
| 13 |  | Graphical representation of the programming  fundamentals assessment of the respondents … ... |  | 101 |
| 14 |  | Fishbone diagram of the students not familiar and find  programming concepts difficult to understand … … |  | 102 |
| 15 |  | Fishbone diagram of the student’s incorrect answer to  programming assessment … … … … … … … … |  | 103 |
| 16 |  | Fishbone diagram of the tool for programming not  effective for learning … … … … … … … … … … |  | 104 |
| 17 |  | Gantt chart for the development of CodeNect … … … ... |  | 105 |
| 18 |  | Context diagram of existing system … … … … … … … |  | 105 |
| 19 |  | Context diagram of CodeNect … … … … … … … … … |  | 106 |
| 20 |  | Theoretical framework of CodeNect: Visual Programming  Software for Learning Fundamentals of Programming … … … … … … … … … … … … … |  | 106 |
| 21 |  | Conduct of software evaluation by IT expert … … … … |  | 107 |
| 22 |  | Conduct of software evaluation by BSIT student … … … |  | 107 |

**LIST OF OTHER APPENDICES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Appendix Figure** |  |  |  | **Page** |
| 1 |  | Sample non-technical evaluation form … … … … … … |  | 96 |
| 2 |  | Sample technical evaluation form … … … … … … … |  | 97 |
| 3 |  | Unit testing sheet results … … … … … … … … … … |  | 99 |
| 4 |  | Integration testing sheet results … … … … … … … … |  | 101 |
| 5 |  | Survey questionnaire … … … … … … … … … … … |  | 103 |
| 6 |  | Pre-assessment and post assessment questionnaire … |  | 105 |
| 7 |  | Certificate of Completion … … … … … … … … … … |  | 107 |