

## Unit 28: Prototyping

<b>Unit code</b>	<b>D/615/1666</b>
<b>Unit level</b>	<b>5</b>
<b>Credit value</b>	<b>15</b>

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### Introduction

A prototype is the first or early sample, model or demonstration version of a concept, design or idea used to test functionality and gather feedback. The objective of prototyping is to build a functional and demonstrable version of a concept and use this version to evaluate different aspects of the concept with end users. A prototype may test a single or multiple facets of a concept and can range in functionality from very basic design mock-ups to fully functional features within complex software applications.

This unit introduces students to the role, basic concepts and benefits of prototyping in the design and development process of software applications. The aim of this unit is to enhance a student's understanding of the methodology, terminology and benefits of prototyping in the design and development of secure software applications.

Among the topics included in this unit are: classification and terminology of prototyping tools and techniques, the relationship between prototypes and release candidate software applications, how prototypes differ from release candidate software applications, categorising prototypes by their intended target end user, functionality and testing requirements, methods of prototyping, most appropriate forms of prototype for the different categories of testing, gathering meaningful insights and results from prototype testing, software release lifecycle and software prototyping concepts.

On successful completion of this unit students will be able to explain the basic concepts of prototyping; plan, build and measure the success of an appropriate prototype with a specific end user in mind; and conduct testing to gather meaningful feedback and data to improve a prototype or final software application.

As a result they will develop skills such as communication literacy, team working, critical thinking, analysis, reasoning and interpretation, business skills, computer software literacy and language, which are crucial for gaining employment and developing academic competence.

## **Learning Outcomes**

By the end of this unit students will be able to:

- LO1. Explore forms of prototypes appropriate for various functionality and end user testing requirements.
- LO2. Plan a prototype for specific target end users and planned tests.
- LO3. Develop multiple iterations of the prototype using appropriate tools.
- LO4. Evaluate user feedback and test results from multiple iterations of the prototype and end user testing.