

**Portfolio 1 (P1)**

Year 1 (2018/19), Semester 2

## SCHOOL OF INFOCOMM TECHNOLOGY

Diploma in Information Technology

**ASSIGNMENT**

**Product is due on 28 Jan 2019 (Mon-Week 16), 11:59hrs**

**Weightage:** 60% of Module

**Individual/Team/Both:** Both

**Format:** Project Proposal (20%)

Product (50%)

Final Presentation and Demo Day Presentation (30%)

**Penalty for late submission:**

* + 10% per day up to the day of the presentation.
  + NO late submission shall be entertained after the presentation.

There are a total of 3 pages (including this page) in this handout.

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| ***WARNING***  ***If a student is found to have submitted work not done by him/her, he/she will not be awarded any marks for this assignment. Disciplinary action will also be taken.***  ***Similar action will be taken for the student who allows other student(s) to copy his/her work.*** |

**1. OBJECTIVE**

This assignment constitutes the core of the Portfolio 1 module.

Students may choose to undertake an IT programming project, a competition-based project or a research project. The chosen project should result in the subsequent deliverable of artifacts that are suitable for your personal portfolios.

**2. THEME**

The theme for this year’s assignment is “Innovations in IT Technologies”.

**Information technology** (**IT**) is the use of [computers](https://en.wikipedia.org/wiki/Computer) to store, retrieve, transmit, and manipulate [data](https://en.wikipedia.org/wiki/Data_(computing)) or [information](https://en.wikipedia.org/wiki/Information), often in the context of a business or other enterprise. IT is leveraged for economic, societal and interpersonal [transactions](https://searchcio.techtarget.com/definition/transaction) and interactions. It has drastically changed how people work, communicate, learn and live.

IT's importance to economic development and business growth has been so monumental, in fact, that it's credited with ushering in what many have labeled the Fourth Industrial Revolution. IT also underpins broad shifts in society, as individuals en masse are moving from personal, face-to-face interactions to ones in the digital space. This new era is frequently termed the [Digital Age](https://searchcio.techtarget.com/definition/Information-Age).

The areas that have been identified as innovative IT technologies are:

1. [Artificial](http://www.smartnation.sg/initiatives/Mobility) Intelligence(AI);
2. [Internet-of-Things](http://www.smartnation.sg/initiatives/Living) (IOT);
3. [Data](http://www.smartnation.sg/initiatives/Services) Analytics;
4. [Mobile](http://www.smartnation.sg/initiatives/Health) and Cloud Computing;
5. [FinTech](http://www.smartnation.sg/initiatives/Services) …etc

In your assignment, you are allowed to move beyond the domain areas listed above. The key focus should be on Innovation.

**3. REQUIREMENTS**

As you are allowed to pursue 3 different types of project for this assignment, this section describes the requirements for each of these types:

1. Research Project

You will submit a research paper that describes your research activities.

The paper should minimally have the following sections:

* Executive summary
* Introduction
* Problem Statement and Significance
* Description of research methods
* Analysis of data
* Recommendation
* Conclusion

During Demo Day, you will present your research findings as a poster exhibition

1. IT Programming Project

You will submit the codes for your IT project. A full-fledged computer system is not expected, a prototype is sufficient. The following points are to be noted:

* You may use any programming language and platform to develop your system
* It could be any type of system, eg an IOT system, a website, a mobile app, a game, a data analytics system, …etc
* Your data could be collected from any sources, eg sensors, web-services, user-inputs, data-bases, …etc
* Your system should work based on your initial proposal

During Demo Day, you will be allocated a table space where you will demo your system to your tutors.

1. Competition Project

Your deliverable will be the requirements set by the competition that you will be taking part in. It could be a programming prototype or even an IT Technopreneurship proposal. However you must first clear with your tutor the competition that you intend to compete in. Examples of good competitions are Code::Xtreme Hackathon, Splash Awards, Imagine Cup, Tan Kah Kee Awards, …etc

During Demo Day, you would present your project as you would during the competition.

**4. DELIVERABLES**

The following deadlines are set as

* Presentation of your proposal during your class practical session in Week 8 (Dec 3-7, 2018)
* Submission date for your product (research paper or prototype) is 28 January 2019 (Mon), 11:59hrs
* Demo Day is on week 16 of the semester, 28 Jan - 1 Feb 2019.

**5. ASSESSMENT**

This assignment constitutes 60% of this module.

The Performance Criteria for your product (prototype/research) are as follows:

1. Innovation: How innovative are the key ideas and concepts behind your research or IT project
2. Difficulty: How difficult and challenging was the task you set out for yourself. For this assignment, we would rather you set higher goals, worked hard, but did not achieve your goals, rather that set for yourself simple goals and achieved them.
3. Value and Usability: Are there prospective social or commercial value in your research or IT project and how user-friendly is your IT project (UX).
4. Technical Features: These refer to the usage of software/hardware features in terms of development efforts and research techniques used. Use of technology will also be considered here.