3055 BA SANGAM COLLEGE

PH: 6674003/9264117   E-mail: basangam@connect.com.fj

WORKSHEET 13

School: **Ba Sangam College**   Year / Level: **13**

Subject: **Computer Studies**   Name of Student: _____

Strand	3 – Application Packages
Sub strand	3.2 – Programming
Content Learning Outcome	Analyze and construct programs using programming skills learnt from C++

1

a. PROGRAMS AND PROGRAMMING

Program

- A program is a list of instructions for the computer to follow to accomplish the task of processing data into information. E.g The instructions are made up of statements used in a programming language such as BASIC

Application Software

- Application Software or Application Programs are the kind of programs that do "end-user work". These are things like word processing and accounting tasks.

2

System Software

- System Software is the software that is concerned with the "background" tasks such as housekeeping chores involving computer operations.

Packaged (pre-written) programs

- These are the so called "of-the-shelf" programs such as word processors, spreadsheet and database managers which are already written and are available on disks ready for purchasing

---

3

Custom-made programs

- These are programs that are specially made or created by professional programmers or the end-user.

Programming

- Programming also known as Software Development is a six-step procedure for creating programs or the list of instruction for the computer to follow to accomplish the task of processing data into information.

4

Six steps in programming or software development

1. Program Specification
2. Program Design
3. Program Code
4. Program Test
5. Program Documentation
6. Program Maintenance

5

UNIT 4.2

b. Discuss how you define the program in **Step 1**, Program Specification or Program Analysis.

This requires the programmer or the end-user to specify **five tasks** Program Specification:

• Determining Program Objectives

To make a clear statement of the problem you are trying to solve.

6

• Determining Desired Output

To make a list of what you want to get out of the computer system. This could be done by the end-user to draw, sketch or write what he or she wants the output to look like in its final form.

• Determining the Input Data

Once you know the output you want, you than can determine the input data and the source of this data.

7

• Determining the Processing Requirements

To determine the processing tasks that must happen for input data to be processed into output.

• Documenting the Program Specifications

Outgoing documents is essential to record Program Objectives, Desired Outputs, Needed Inputs and Required Processing

---

8

c. Explain how you plan a solution in Step 2, Program Design

Describe the **four structured programming techniques** that could be used:

• Top-Down Program Design

Based on the determined Outputs and Inputs, Top-Down Design identifies processing steps to take. Such steps are called program modules or modules.

• Pseudocode

This is a narrative form of the logic of the program you will write. It is like a summary or an outline form of the program.
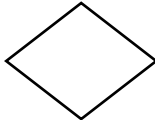

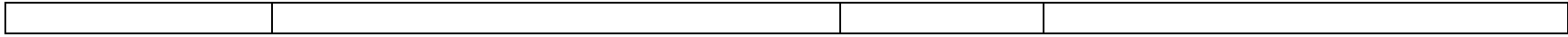*Sangam Education Board – Online Resources*

ACTIVITY
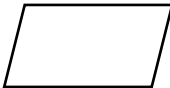
1. Define: (9 marks)

a) Program - _____

b) Off the shelf packages - _____

c) Custom made software - _____

d) Pseudocode - _____

e) Flowcharts - _____

f) Top down program design - _____

g) Programming - _____

h) System software - _____

i) Application software - _____

2. Label the following flowchart symbols and give their purpose: (6 marks)

▭		▱	
⬭		◇	
→		○	

THE END