
Glossary: Unit 17 Program Design, Production and Testing

Term	Definition
Action chart	A table showing the actions related to events within a program.
Array	A collection of variables of the same type held in sequence.
Bottom up	Smaller parts of the program are designed first and then an overall program design is created to bring the parts together.
Boundary data	Data that lies on the edges of the permitted range.
CASE tools	Software that aids the programming process such as form generators, prototype generators.
Compilers	Programs that translate program code into executable code by translating the whole program at one time.
Concatenation	Joining two strings together.
Data capture	Collection of data into a form ready to be entered into a computer.
Data dictionary	A full description of all the data used by the program including its type, structures and validation.
Data driven	The data required by a program is designed first to ensure efficient data storage, then the processes are designed to operate on the data.
Data entry form generators	Programs that allow the easy production of code to generate data entry forms. This is a facility of many visual programming environments.
Data structure	A collection of variables held in memory during a program's operation. Examples include arrays and records.
Data structure diagram	Diagrams illustrating data structures such as arrays and records.
Debuggers	Programs that enable a programmer to investigate the conditions in which a program is running when an error occurs.
Decision table	A table that shows the actions to be taken when particular conditions arise.
Editor	Text processing software used to enter program code.
Event driven	A program is defined as a series of events that can happen in any order. Processes are designed to deal with individual events.
Event sequence diagram	A diagram showing the sequence of events taking place during a program's operation.

File	A collection of data stored on secondary storage such as disk.
File organisation	The way that records in a file are organised and therefore accessed.
File structure	The organisation of data in a file referring to the way the data is structured in its individual records.
Flowchart	A graphical representation of the operation of a program showing the flow of processing between its operations.
Indexed	Records are stored one after another, sorted into order and accessed by looking up an individual record's position in an index.
Inputs	Data or an instruction given to a program.
Interpreters	Programs that translate and execute program code one line at a time.
Logging	Reading and storing data for later use.
Maintenance	The process of ensuring that a program continues to run smoothly and adapting it to meet changing user requirements.
Modularity	Larger programs are organised into a number of parts, each fairly self-contained.
Object based	A program is designed as a set of objects each defining its data and the operations that can be carried out on that data.
Outputs	Data produced by a program and presented to the user.
Process driven	The processes are designed first and then the data is designed to fit the processes.
Term	Definition
Processes	Tasks or operations carried out by a computer.
Program structure diagram	A graphical representation of a program showing the flow of data between functions and/or the flow of control between functions. Examples include hierarchy charts, flowcharts and JSP diagrams.
Project builder	Programming software that organises program development files into projects that can be built into a final program.
Pseudocode	A program description language that uses control structures and keywords like programming languages but is less strict.
Random	Records are stored in no particular order and accessed directly using their individual addresses.
Record	A collection of variables of different types held in sequence.
Report generators	Programs that allow the easy production of code to generate reports from stored data.

Requirements specification	A definition of what is expected of a program in terms of what it must do.
Run-time errors	Errors that occur during the running of a program such as overflow or division by zero.
Sequential	Records are stored one after another, sorted into order and can only be accessed from first to last.
Serial	Records are stored one after another, in no particular order and can only be accessed from first to last.
Technical documentation	A written document that describes in detail how a program works and is written for an expert reader.
Test data	The data to be input into a program for the purpose of testing it for a particular purpose.
Top down	The overall program is defined in simple terms and then split into a number of smaller sub-tasks. Each sub-task is defined and split again.
Validation	Checking of data by a program to ensure that it is reasonable and complete.
Variables	Defined and labelled areas of memory used to store data of a stated type during a program's execution.
Verification	Checking of data transfer to ensure that it has been transferred correctly e.g. entering a password twice.