

Software Engineering

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Program Vs Software

What Is A Computer Program

- **Program is a set of instructions written in a programming language used to execute for a specific task or particular function.**
- A program does not have further categorization.
- A program cannot be software.
- A program consists of a set of instructions which are coded in a programming language like c, C++, PHP, Java etc.
- Programs do not have a user interface.
- A program is developed and used by either a single programmer or a group of programmers.
- A program is compiled every time when we need to generate some output from it.
- Program has limited functionality and less features.
- Program functionality is dependent on compiler.
- A program takes less time to build/make.
- Program development approach is un-procedural, un-organized and unplanned.
- The size of a program ranges from kilobytes (Kb) to megabytes (Mb).
- Examples of computer programs include: Operating system, office suite, video games, malware, a web browser like Mozilla Firefox and Apple Safari.

What Is A Computer Software

- **Software is a collection of several programs and other procedures and documentation.**
- Software can be categorized into two categories: application software and system software.
- Software can be a program.
- Software consists of bundles of programs and data files. Programs in specific software use these data files to perform a dedicated type of tasks.
- Every software has a dedicated user interface. The user interface of software may be in the form of a command prompt or in a graphical format.
- Software is developed by either a single programmer or a group of programmers.
- Whole software is compiled, tested and debugged during the development process.
- Software has lots of functionality and features such as GUI, input/output data, process etc.
- Software functionality is dependent on the operating system.
- Software takes relatively more time to build/make when compared to program.
- Software development approach is systematic, organized and very well planned.
- The size of a software ranges from megabytes (Mb) to Gigabytes (Gb).
- Examples of software include: Microsoft Word, Microsoft Excel, VLC media player, Firefox, Adobe Reader, Windows, Linux, Unix, Mac etc.

Program Vs Software

BASIS OF COMPARISON	PROGRAM	SOFTWARE
Description	Program is a set of instructions written in a programming language used to execute for a specific task or particular function.	Program is a set of instructions written in a programming language used to execute for a specific task or particular function.
Categories	A program does not have further categorization.	Software can be categorized into two categories: application software and system software.
Flexibility	A program cannot be software.	Software can be a program.
Consists Of	A program consists of a set of instructions which are coded in a programming language like c, C++, PHP, Java etc.	Software consists of bundles of programs and data files. Programs in specific software use these data files to perform a dedicated type of tasks.
User Interface	Programs do not have a user interface.	Every software has a dedicated user interface.
Development	A program is developed and used by either a single programmer or a group of programmers.	Software is developed by either a single programmer or a group of programmers.

Program Vs Software(continue...)

Compilation	A program is compiled every time when we need to generate some output from it.	Whole software is compiled, tested and debugged during the development process.
Functionality & Features	Program has limited functionality and less features.	Software has lots of functionality and features such as GUI, input/output data, process etc.
Dependability	Program functionality is dependent on compiler.	Software functionality is dependent on the operating system.
Creation Time	A program takes less time to build/make.	Software takes relatively more time to build/make when compared to program.
Development Approach	Program development approach is un-procedural, un-organized and unplanned.	Software development approach is systematic, organized and very well planned.
Size	The size of a program ranges from kilobytes (Kb) to megabytes (Mb).	The size of a software ranges from megabytes (Mb) to Gigabytes (Gb).
Examples	Operating system, office suite, video games, malware, a web browser like Mozilla Firefox and Apple Safari.	Microsoft Word, Microsoft Excel, VLC media player, Firefox, Adobe Reader, Windows, Linux, Unix, Mac etc.

Program Vs Software(continue...)

- Usually small in size
 - Author himself is sole user
 - Single developer
 - Lacks proper user interface
 - Lacks proper documentation
 - Ad hoc development.
- Large
 - Large number of users
 - Team of developers
 - Well-designed interface
 - Well documented & user-manual prepared
 - Systematic development

Thank You!