What is the key distinction emphasized in the paragraph regarding software verification?

a) The need for machine-independent programming languages

b) The difference between software believed to be correct and software that is correct

c) The importance of security in software development

d) The use of assembly languages in software verification

Correct Answer: b

What was the root cause of the Therac-25 X-ray radiation incident mentioned in the paragraph?

a) Security breach

b) Hardware failure

c) Technical issue with software

d) Environmental factors

Correct Answer: c

In the context of programming languages, what is an assembler used for?

a) Executing high-level code

b) Debugging machine code

c) Converting mnemonic expressions to machine language

d) Writing machine-independent code

Correct Answer: c

What characterizes the third generation of programming languages mentioned in the paragraph?

a) They are machine-dependent and use assembly language.

b) They are machine-independent and use natural language.

c) They are higher-level and machine-independent.

d) They are lower-level and machine-dependent.

Correct Answer: c

Which programming languages are cited as examples of third-generation languages in the paragraph?

a) Assembly and FORTRAN

b) COBOL and machine language

c) FORTRAN and COBOL

d) FORTRAN and HLT

Correct Answer: c

What term is used to describe programs that translate high-level primitives into machine-language programs?

a) Compilers

b) Assemblers

c) Interpreters

d) Translators

Correct Answer: a

What disadvantage of assembly languages is highlighted in the paragraph?

a) They are machine-dependent and cannot be transported.

b) They force programmers to think in small, machine-level steps.

c) They are difficult to compile into machine language.

d) They lack support for high-level primitives.

Correct Answer: b

What is one of the challenges when making software machine-independent?

a) The lack of standardized languages

b) The difficulty of translating natural languages to machine code

c) The need for precise grammatical analysis

d) The variety of machine-specific I/O operations

Correct Answer: d

Which programming paradigm is associated with the imperative approach to programming?

a) Functional

b) Object-oriented

c) Imperative

d) Declarative

Correct Answer: c

In the declarative paradigm, what task does a programmer primarily focus on?

a) Developing precise algorithms

b) Translating machine code into high-level code

c) Describing the problem to be solved

d) Debugging code

Correct Answer: c

What was the significant discovery that boosted the declarative paradigm?

a) The emergence of logic programming

b) The development of high-level languages

c) The creation of formal logic within mathematics

d) The advancement of machine-independent languages

Correct Answer: c

Which programming paradigm emphasizes building solutions through a sequence of commands?

a) Functional

b) Object-oriented

c) Imperative

d) Declarative

Correct Answer: c

What is the primary goal of the declarative paradigm in programming?

VU APEX CAMPUS	**vuapex.com.pk**	**vuapex.pk**
Contact Us:	**0322-8877744**	

a) Developing machine-dependent algorithms

b) Simplifying the debugging process

c) Describing the problem to be solved

d) Enhancing security measures

Correct Answer: c

Which term is used for small variations of a programming language that are not part of the standard version?

a) Language extensions

b) Compiler enhancements

c) Syntax modifications

d) Standard deviations

Correct Answer: a

What is the primary purpose of an assembler in programming?

a) Executing high-level code

b) Debugging machine code

c) Converting mnemonic expressions to machine language

d) Writing machine-independent code

Correct Answer: c

What is the term for a program that translates high-level primitives into machine-language programs?

a) Compilers

b) Assemblers

c) Interpreters

d) Translators

Correct Answer: a

What challenge often arises when making software machine-independent?

a) Lack of standardized languages

b) Difficulty in formal grammatical analysis

c) Variability in I/O operations

d) Need for advanced machine translation

Correct Answer: c

What term describes the result of minor modifications to a programming language that make it incompatible with other compilers?

a) Dialect

b) Syntax error

c) Compiler extension

d) Standardization

Correct Answer: a

What major paradigm shift has influenced the development of programming languages?

a) A shift from imperative to functional languages

b) A shift from assembly languages to high-level languages

c) A shift from machine independence to machine dependence

d) A shift from focusing on algorithms to high-level problem descriptions

Correct Answer: d

What is the term for a high-level primitive used to represent a concept associated with a major feature of a product during the design process?

a) Language extension

b) Program variable

c) Compiler feature

d) High-level identifier

Correct Answer: b

VU APEX CAMPUS	**vuapex.com.pk**	**vuapex.pk**
Contact Us:	**0322-8877744**	