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Matric/no:-18/SCI01/072

Department:-computer science

Course:-CSC 206

 Answer

1a Programming is the implementation of logic to facilitate specified computing operations and functionality

B A program is a series of coded software instructions to control the operation of a computer or other machine

C Programming language is a formal language comprising a set of instructions that produce various kinds of output. Programming languages are used computer programming to implement algorithms

2a machine language:-it’s the language of machines, consisting of bits(1s and 0s) put together into chunks like bytes, a group of 8 bits and lots of other larger sizes.

B Assembly language:-is a little easier than machine language, but not much it uses more convenient numbers, symbols, and abbreviations to describe the huge strings of 1s and 0s,to make it both easier and more memorable to type in instructions. The computer knows that certain strings of numbers are commands, so assembly language lets you use English-like strings instead of numbers to refer to those.

C high-level language:-These languages use English-like statements and symbols and are independent of the type of computer you are using. You can even put in lots of English labels and comments to help remember what the instructions are doing.

3a naturalness

 B efficiency

 C locality

 D extensibility

 E structured programming support

4 a procedural:-The functionality of the computer program is divided in procedures, those procedures are block of logic that perform a certain set of actions that are grouped together

B object oriented:-The functionality of the computer program is represented by objects. Each object has its own internal process (methods) that can be called from outside by calling those methods with the appropriate input parameters.

C service oriented:-These are several layers in the way computer program work together, there are applications with data and certain operations on those data

D Aspect oriented:-I have no experience with this one

E functional:-I don’t have experience with functional programming but I know that it can be very powerful. The characteristic is that you define the set of inputs and the programming language will generate the corresponding processing algorithms

F logical programming:- Here the problem is broken down into logical units rather than functional units.

5 a project characteristics

 B project management expertise

 C program evaluation

 D management development

 E project management

6a learn to break large problems into smaller ones

 B navigate merge conflicts and improve communication

 C learn to work in a constantly evolving environment

 D utilize stand-up/scrum meetings to share knowledge

7 Structured programming is a programming paradigm aimed at improving the clarity, quality, and development time of a computer program by making extensive use of the structured control flow constructs of selection(if/then/else) and repetition(while and for),block structures and subroutines

8a sequence; ordered statements or subroutines executed in sequence

B selection; one or a number of statements is executed depending on the state of the program. This is usually expressed with keywords such as if, then, else and end if

 C Iteration; a statement or block is executed until the program reaches a certain state or operations have been applied to every element of a collection. This is usually expressed with keywords such as while, repeat, for or do until. Often it is recommended that each loop should only have one entry point (and in the original structural programming, also only one exit point, and a few languages enforce this)

D Recursion; a statement is executed by repeatedly calling itself until termination conditions are met. While similar in practice to iterative loops, recursive loops may be more computationally efficient and are implemented differently as a cascading stack.

10 system analysis and design

 Properties

A Identify, understand and plan for organizational and human impacts of planned systems, and ensure that new technical requirements are properly integrated with existing processes and skill sets

B plan a system flow from the ground up

C write technical requirements from a critical phase

D document requirements or contribute to user manuals

E help programmers during system development e.g provide use cases, flowcharts, UML and BPMN diagrams

9 sequence-lines or blocks of code are written and executed in sequential order e.g X=5,y=11,z=x +y write line (z)

13 structured oriented language

 A less abstraction and less flexibility

 B structured oriented language provides less reusability more function dependency

 C less abstraction and less flexibility

 D structured oriented language follows top-down approach

 E In structured oriented language, programs are divided into small self contained functions

 Object oriented language

 A more abstraction and more flexibility

 B object oriented language follows bottom-up approach

 C object oriented language is designed which focuses on data

 D object oriented language provides more reusability, less function dependency

 E in object oriented language, programs are divided into small entities called objects

11 import java.util.scanner;

 Class volume of sphere

 {

 Public static void main (string args[])

 {

 Scanner s=new scanner(system.in);

 System. out. Println (‘’enter the radius of sphere:’’);

 Double r=s.nextdouble();

 Double volume= (4\*22\*r\*r\*r)/(3\*7);

 System.out.println(“volume is:” +volume );

 }

}

12 // cpp program to calculate volume

 // and surface area to cone

 #include<iostream>

 Using namespace std;

 Float pi = 3.4159;

 // function to calculate

// volume of cone

Float volume(float r, float h)

{

 Return (float (1) / float (3)) \* pi\*

 R \*r\*h;

}

// function to calculate

 // surface area of cone

Float surface-area (float r, float s )

{

 Return pi\* r\* s + pi \* r \*r;

}

// driver code

Int main ()

{

 Float radius=5;

 Float slant-height = 13;

Float height = 12;

Float vol, sur-area;

// printing value of volume

// and surface area

Cout << ‘’volume of cone : “

 << volume(radius, height )

Cout << “surface area of cone : “

 << surface \_ area(radius, slant\_height );

Return 0 ;

}