Task session 1

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**Task 1**

What is OOD

Object-oriented design (OOD) is the process of using an object-oriented methodology to design a computing system or application. This technique enables the implementation of a software solution based on the concepts of objects.

Why we use ood

It promises to reduce development time, reduce the time and resources required to maintain existing applications, increase code reuse, and provide a competitive advantage to organizations that use it.

**Task 2**

What is operating system core language

Most of the operating systems are written in the C/C++ languages. These not only include Windows or Linux (the Linux kernel is almost entirely written in C), but also Google Chrome OS, RIM Blackberry OS 4.

The kernel is an essential center of a computer operating system. It is the core that provides basic services for all other parts of the operating system. It is the main layer between the OS and hardware. Kernel helps in the process and memory management, file systems, device control, and networking.

**Task 3**

What are the first 10 programing languages appeared?

1. Fortran 2. Lisp

3. COBOL 4. BASIC

5. Pascal 6. C

7. Smalltalk 8. SQL

9. Ada 10. MATLAB

**Task 4**

What are the type of languages that we could use in giving instructions?

There are three types of programming languages: machine language, assembly language, and high-level language. Machine language is easier for the computer to understand but harder for the programmer to understand. This is because machine language is simply the language of machines

**Task 5**

What is the new programming language that have the same syntax of python and as fast as C?

The Peregrine programming language

**Task 6**

List 1o programming languages open source and 10 not open source

Open source:

1. JavaScript 2. Python 3. PHP 4. Swift

5. R 6. C#

7. Ruby 8. Scala

Closed source:

1. Java 2. C++

3. C# 4. SQL

**Task 7**

What are JavaScript advantages

1. Speed 2. Simplicity

3. Popularity 4. Interoperability

5. Server Load 6. Rich Interfaces

7. Extended Functionality 8. Versatility

9. Less Overhead

**Task 8**

What is fragmentation?

Fragmentation is a concept that pops up in a lot of places in systems programming. Fragmentation occurs when a user program has allocated memory, but doesn't use it.

**Personalized task: What is OpenCV**

OpenCV (Open Source Computer Vision Library) is an open source computer vision and machine learning software library. OpenCV was built to provide a common infrastructure for computer vision applications and to accelerate the use of machine perception in the commercial products.

The library has more than 2500 optimized algorithms, which includes a comprehensive set of both classic and state-of-the-art computer vision and machine learning algorithms. These algorithms can be used to detect and recognize faces, identify objects, classify human actions in videos, track camera movements, track moving objects, extract 3D models of objects, produce 3D point clouds from stereo cameras, stitch images together to produce a high resolution image of an entire scene, find similar images from an image database, remove red eyes from images taken using flash, follow eye movements, recognize scenery and establish markers to overlay it with augmented reality, etc. OpenCV has more than 47 thousand people of user community and estimated number of downloads exceeding 18 million.

It has C++, Python, Java and MATLAB interfaces and supports Windows, Linux, Android and Mac OS. OpenCV leans mostly towards real-time vision applications and takes advantage of MMX and SSE instructions when available. A full-featured CUDAand OpenCL interfaces are being actively developed right now. There are over 500 algorithms and about 10 times as many functions that compose or support those algorithms. OpenCV is written natively in C++ and has a templated interface that works seamlessly with STL containers.