NAME: IKEH EBUBECHUKWU DANIEL

MATRIC NO: 15/ENG06/039

COURSE CODE: MEE 586

**ASSIGNMENT**

An integrated **CAD/CAM** system provides one model supporting both **design** and manufacturing functions instead of having various file formats, numerous data translations/conversions, and different **CAD** and **CAM** models. Working with the same data is analogous to speaking the same language.

**CHARACTERISTICS OF A GOOD CAD SOFTWARE**

1. **Efficiency:** Efficient software is that which can use less resources such as CPU in terms of time and usage to give a better output.
2. **Simplicity:** A software must be simple to use and easy to understand and must be user friendly.
3. **Flexibility:** The software must be able to incorporate th design modification with out much of difficulty.
4. **Readability:** This provides the capability within the software to help the user as and when required.
5. **Portability:** The software must have the capacity to get transferred from one system to other.
6. **Reliability:** To avoid causality the software must be able to avoid unwanted operation.
7. **Recover ability:** A Good software must be able to give warning before getting crashed and must be able to recover.

**DIVISIONS OF SOFTWARE COMPONENTS**

1. **SYSTEM SOFTWARE:** includes the programs that are dedicated to managing the computer itself, such as the **operating system**, file management utilities, and disk operating system (or DOS). The operating system manages the computer hardware resources in addition to application and data. Without systems software installed in our computers we would have to type the instructions for everything we wanted the computer to do.
2. **APPLICATIONS SOFTWARE:**, are often called productivity programs or end-user programs because they enable the user to complete task, such as creating documents, spreadsheets, database and publications, doing online research, sending email, designing graphics, running businesses, and even playing games.

Application software is specific to the task it is designed of and can be as simple as a calculator application or as complex as a word processing application. When you begin creating a document, the word processing software has already set the margins, font style and size, and the line spacing for you. But you can change these settings, and you have many more formatting options available. For example, the word processor application makes it easy to add color, headings, and pictures or delete, copy, move, and change the document’s appearance to suit your needs.

1. **PROGRAMMING LANGUAGES :** Now this is a kind of computer software which is used exclusively by computer programmers. Unless we are also programmers, we are unlikely to come across programming languages. A simple way to understand programming languages is to think of them as bricks which can be used to create applications and operating system. C++, Java and Simlab are some popular programming languages. Generally Java is used for internet applications. C++ is a language of professional developers and used extensively in developing operating system. PHP is another language used for internet applications. There is a new class of languages which are being utilized for the mobiles. These are light weight, modular languages which are used to design mobile applications.

**THE SCOPE OF CAD/CAM**

**CONCEIVE**

CONCEPT

RESEARCH

NEED OR IDEA

DRAFT

**Design**

MODEL DESIGN

PART LIBRARIES

ASSEMBLY MODELING

**Validate**

ANALYSIS

**Manufacture**

MARKET

MANUFACTURING

ENGINEERING DRAWING

PRESENTATION

PLANNING

TOOL DESIGN