

MINI PROJECT – I:



GLA
UNIVERSITY
MATHURA
Recognised by UGC Under Section 2(f)

Accredited with **A** Grade by **NAAC**

PROJECT TITLE

The logo for 'codeline' is displayed in a stylized font. The 'c' is a light blue circle. The 'o' is a blue circle with a small white dot in the center. The 'd' is a blue circle with a small white dot in the center. The 'e' is a blue circle with a small white dot in the center. The 'l' is a blue vertical line. The 'i' is a blue vertical line with a small white dot in the center. The 'n' is a blue vertical line with a small white dot in the center. The 'e' is a blue circle with a small white dot in the center.

SUBMITTED TO: Ms. Madhu (Technical Trainer)

SUBMITTED BY: -

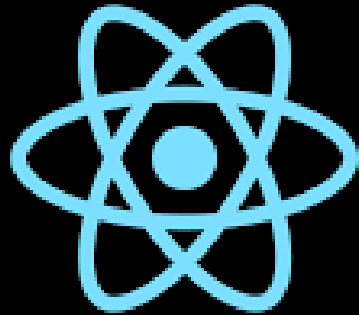
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INTRODUCTION

In the mini project, our main objective is to create a system in which that we have the compilers of HTML, CSS and JavaScript alongside on a single setup and the output is obtained at once without the need of creating separate repositories for accessing them, thus saving time and effort at the same time.



React JS



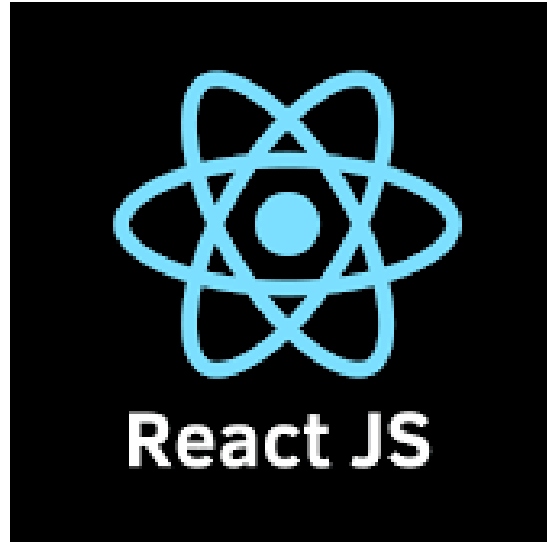
HTML

Hyper Text Markup Language



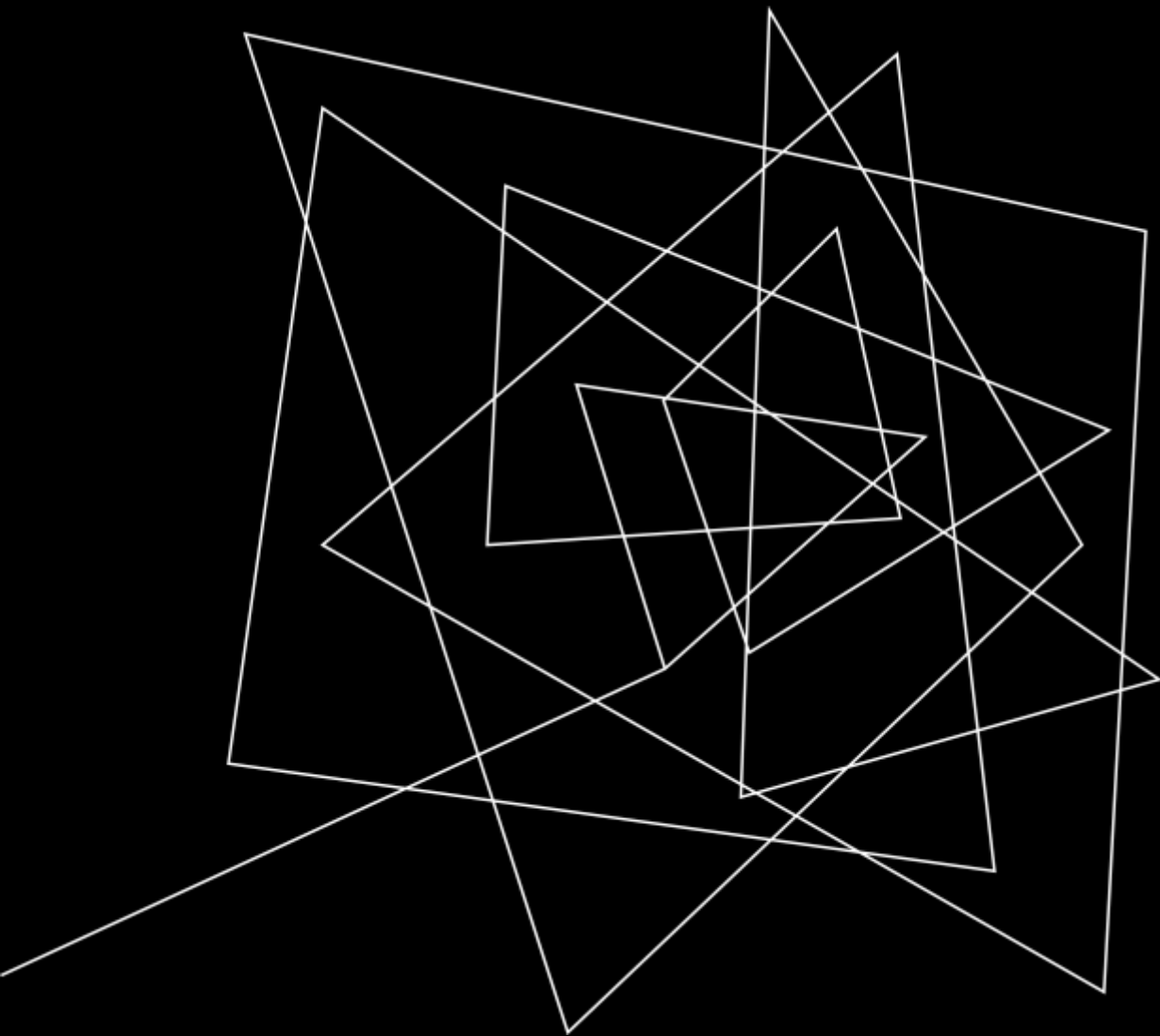
INTRODUCTION

We have used REACT JS to implement the compilers in our project. React (also known as React.js or React-JS) is a free and open-source front-end JavaScript library for building user interfaces based on UI components.



WHY REACT?

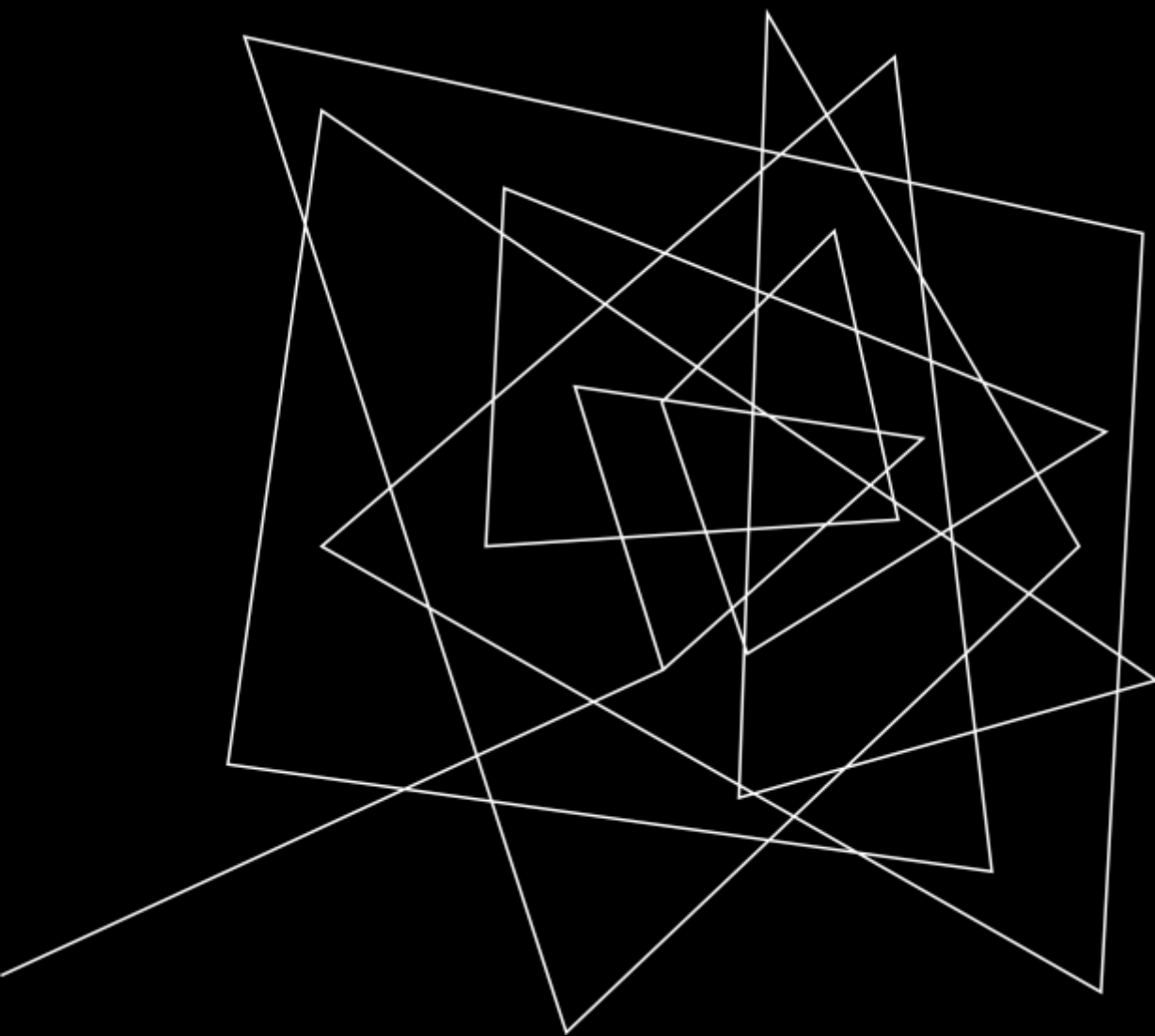
- 1) React is a single-page language.
- 2) React does not require much refreshing.
- 3) ReactJS is a perfect combination of JavaScript and HTML tags. The usage of the HTML tags and JS codes, make it easy to deal with a vast set of data containing the document object model.
- 4) ReactJS trails one-way data binding. This means that absolutely anyone can track all the changes made to any particular segment of the data.
This is a symbol of its simplicity.



HYPERTEXT MARKUP LANGUAGE (HTML): THE MOST EXTENSIVELY USED FRONTEND LANGUAGE IS HTML, WHICH IS A MARKUP LANGUAGE. HYPERTEXT MARKUP LANGUAGE IS THE ABBREVIATION FOR HYPERTEXT MARKUP LANGUAGE. IT'S A PROGRAMMING LANGUAGE THAT IS USED TO MAKE WEBSITES AND WEB APPS .



CASCADING STYLE SHEETS: IT IS A DESIGN LANGUAGE THAT SIMPLIFIES MAKING WEB PAGES PRESENTABLE. SELECTORS ARE USED TO PICK ELEMENTS AND APPLY STYLES TO THEM. THE NAME *CASCADING* COMES FROM THE SPECIFIED PRIORITY SCHEME TO DETERMINE WHICH STYLE RULE APPLIES IF MORE THAN ONE RULE MATCHES A PARTICULAR ELEMENT. THIS CASCADING PRIORITY SCHEME IS PREDICTABLE.



JavaScript (JS) is a lightweight, interpreted, or just-in-time compiled programming language with first-class functions. While it is most well-known as the scripting language for Web pages, many non-browser environments also use it, such as Node.js, Apache CouchDB and Adobe Acrobat. JavaScript is a prototype-based, multi-paradigm, single-threaded, dynamic language, supporting object-oriented, imperative, and declarative (e.g. functional programming) styles

COMPILER

A compiler is a **special program that translates a programming language's source code into machine code, bytecode or another programming language.** The source code is typically written in a high-level, human-readable language such as Java or C++.



THERE ARE THREE TYPES OF COMPILERS:

1) SINGLE PASS COMPILERS

2) TWO PASS COMPILERS

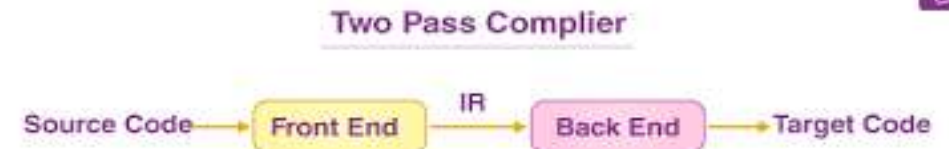
3) MULTI-PASS COMPILERS

SINGLE PASS COMPILER-



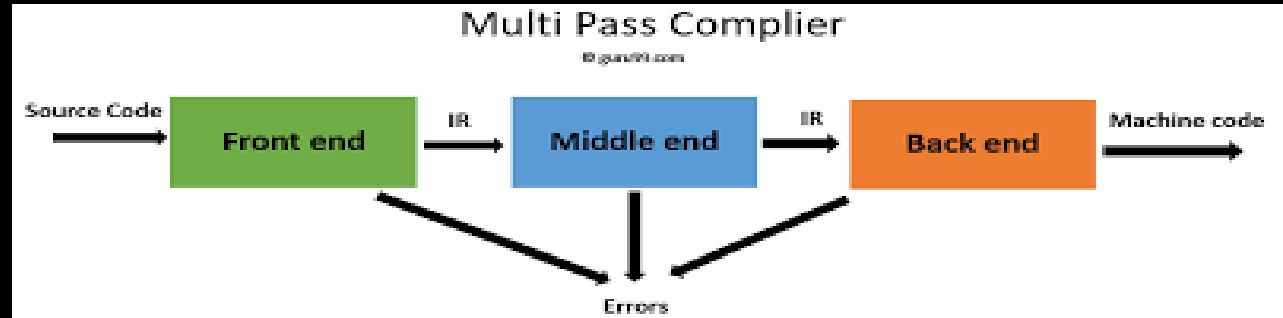
In computer programming, a **one-pass compiler** is a compiler that passes through the parts of each compilation unit only once, immediately translating each part into its final machine code. This is in contrast to a multi-pass compiler which converts the program into one or more intermediate representations in steps between source code and machine code, and which reprocesses the entire compilation unit in each sequential pass.

TWO PASS COMPILER-



A language processor that goes through the program to be translated twice ; on the first pass it checks the syntax of statements and constructs a table of symbols, while on the second pass it actually translates program statements into machine language.

MULTI PASS COMPILER



A **multi-pass compiler** is a type of compiler that processes the source code or abstract syntax tree of a program several times. This is in contrast to a one-pass compiler, which traverses the program only once. Each pass takes the result of the previous pass as the input, and creates an intermediate output. In this way, the (intermediate) code is improved pass by pass, until the final pass produces the final code. Multi-pass compilers are sometimes called **wide compilers**.



SUMMARY:

To conclude, compilation is the process of translating the code we write, into code that a computer understands. It does this by scanning and parsing your source input, and mapping this input to the target output which your computer can understand. Further, a compiler can be built and implemented in any language. Keeping that in mind, we have used REACT JS to implement the compilers in our project. In the mini project we have created, a system in which that we have the compilers of JS, HTML and CSS alongside on a single setup and the output is obtained at once without the need of creating separate repositories for accessing them, thus saving time and effort at the same time.



REFERENCES:

Books:

1- HTML

2--HTML – by Jon Duckett

3-Head First HTML and CSS by Elizabeth Robson and Eric Freeman

4- CSS

5-CSS – by Eric A. Meyer

6- CSS –by Jon Duckett □ JAVASCRIPT

7- You Don't Know JS by Kyle Simpson

8-A Smarter Way to Learn JavaScript by Mark Myers

A series of white, thin, overlapping geometric lines on a black background, forming various polygons and intersecting points, primarily located on the left side of the slide.

THANK YOU