ASSIGNMENT

1) Illustrate the need of commander.js package?

The commander.js package is a popular Node.js library used to build command-line interfaces (CLI). It simplifies the process of creating commands, parsing arguments, and displaying help messages. Here's an illustration of why you need commander.js in a Node.js project:

Suppose you want to create a CLI tool like:

node app.js greet --name John

Manually parsing arguments (process.argv) is tedious:

-app.js

```
const args = process.argv.slice(2);
if (args[0] === "greet" && args[1] === "--name" && args[2]) {
  console.log(`Hello, ${args[2]}!`);
} else {
  console.log("Usage: node app.js greet --name <name>");
}
```

Using commander.js, your code becomes clean and powerful:

npm install commander

-app.js

```
const { Command } = require('commander');
const program = new Command();
```

-program

```
  .command('greet')
  .description('Greet a user by name')
  .requiredOption('--name <name>', 'Name to greet')
  .action((options) => {
    console.log(`Hello, ${options.name}!`);
```

```
  });
program.parse(process.argv);
```

Now you can run:

```
node app.js greet --name John
```

And you automatically get help with:

```
node app.js –help
```

2) Implement small application which will make use of mentioned package?

Code:

```
const { Command } = require('commander');
const program = new Command();
program
  .name('greet-cli')
  .description('Simple CLI to greet users and show time')
  .version('1.0.0');
program
  .command('greet')
  .description('Greet a user by name')
  .requiredOption('-n, --name <name>', 'Name of the user')
  .option('-t, --time', 'Show current date and time')
  .action((options) => {
   console.log(`Hello, ${options.name}!`);
   if (options.time) {
    console.log(`Current Time: ${new Date().toLocaleString()}`);
   }
  });
program.parse(process.argv);
```
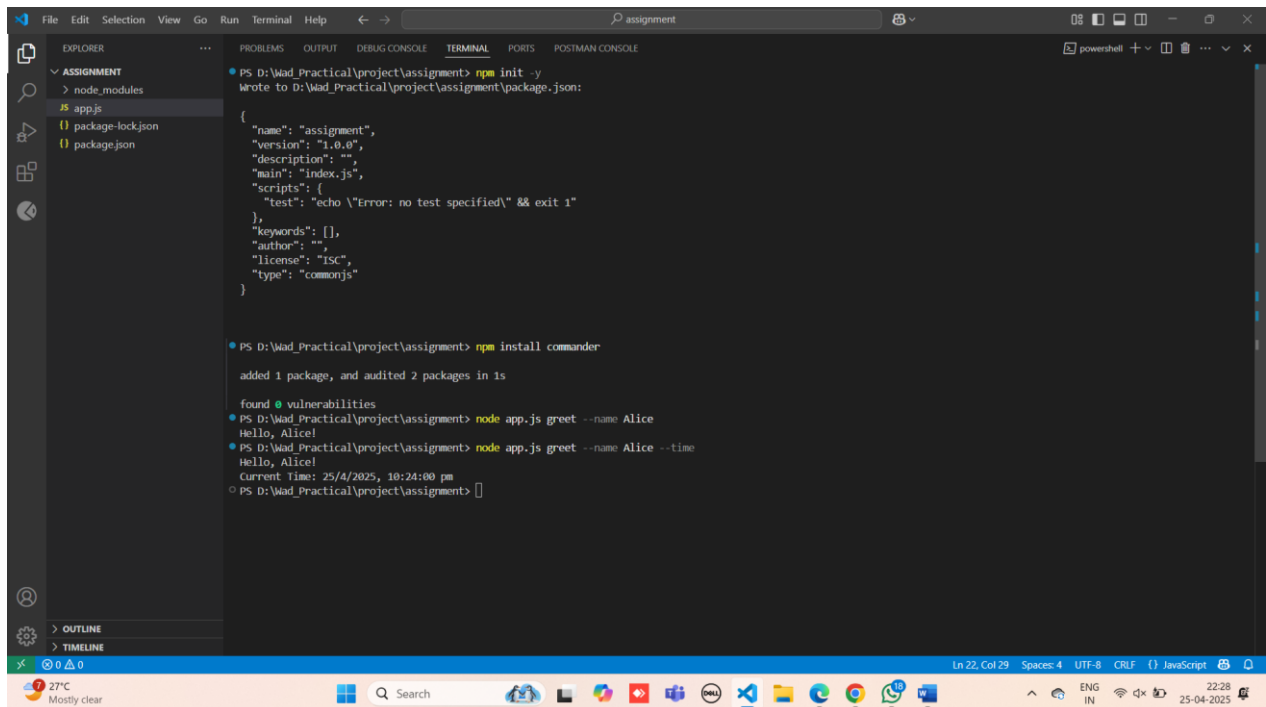
3) Illustrate the need for code of ethics?

A Code of Ethics is a set of principles and guidelines that help individuals or organizations distinguish right from wrong in their work or behavior.

 Need a Code of Ethics

1.Guides Ethical Decision-Making

 Scenario: A software developer is asked to build a feature that collects user data without their consent.

Without a Code of Ethics: They might proceed, thinking, "It's just part of the job."

With a Code of Ethics: They refer to principles like "Respect user privacy" or "Do no harm" and raise concerns.

Helps in doing what's right, not just what's asked.

2. Builds Trust and Reputation

Example: If a tech company is transparent, respects user data, and treats employees fairly, it earns public trust.

 Ethics Trust Long-term Success

3.Reduces Legal and Moral Risks

Example: A business that discriminates in hiring may face legal action. A code of ethics ensures fair treatment and compliance with laws.

 Prevents conflicts, scandals, and lawsuits.

4.Creates a Positive Work Culture

Scenario: A company's code emphasizes honesty, collaboration, and respect.

Result: Employees feel safe, valued, and motivated to contribute positively.

Ethics = Strong, healthy, inclusive workplace

5.Consistency in Behavior

Example: If everyone follows the same ethical code, there's less confusion or favoritism.

Everyone knows what is expected from interns to CEOs.