

1. Python – Basic CRUD Example (Dictionary)

Simple CRUD with dictionary

```
students = {}
```

Create

```
students["101"] = {"name": "Alice", "marks": 85}
```

Read

```
print(students["101"])
```

Update

```
students["101"]["marks"] = 90
```

Delete

```
del students["101"]
```

◆ 2. Java – Class and Object Example

```
public class Student {
```

```
    String name;
```

```
    int marks;
```

```
    Student(String n, int m) {
```

```
        name = n;
        marks = m;
    }

    void display() {
        System.out.println(name + " scored " + marks);
    }

    public static void main(String[] args) {
        Student s1 = new Student("Bob", 80);
        s1.display();
    }
}
```

◆ 3. HTML + CSS + JS – Simple Page

HTML:

```
<!DOCTYPE html>

<html>

<head>

    <title>My Web Page</title>

    <link rel="stylesheet" href="style.css">

</head>

<body>
```

```
<h1 id="greet">Hello!</h1>
<button onclick="changeText()">Click Me</button>
<script src="script.js"></script>
</body>
</html>
```

CSS (style.css):

```
body {
  font-family: Arial;
  background-color: #f0f0f0;
  text-align: center;
}
```

JavaScript (script.js):

```
function changeText() {
  document.getElementById("greet").innerText = "Welcome to Smart Internz!";
}
```

◆ 4. Node.js + Express – Basic API

```
const express = require('express');
const app = express();
app.use(express.json());
```

```
let students = [];
```

```
app.post('/students', (req, res) => {  
  students.push(req.body);  
  res.send("Student added");  
});
```

```
app.get('/students', (req, res) => {  
  res.json(students);  
});
```

```
app.listen(3000, () => {  
  console.log("Server running on port 3000");  
});
```

◆ 5. MongoDB (Mongoose) – Schema Example

```
const mongoose = require('mongoose');  
  
const studentSchema = new mongoose.Schema({  
  name: String,  
  marks: Number  
});
```

```
const Student = mongoose.model('Student', studentSchema);
```

◆ 6. Python – Basic ML Example (Scikit-Learn)

```
from sklearn.linear_model import LinearRegression
```

```
import numpy as np
```

```
X = np.array([[1], [2], [3]])
```

```
y = np.array([2, 4, 6])
```

```
model = LinearRegression()
```

```
model.fit(X, y)
```

```
print(model.predict([[4]])) # Output: [8.]
```

◆ 7. Git Commands (Terminal)

```
git init
```

```
git add .
```

```
git commit -m "Initial commit"
```

```
git remote add origin https://github.com/username/repo.git
```

```
git push -u origin main
```