**TYPESCRIPT TASK**

**Step 1:**

**A screenshot of a computer program

Description automatically generated**

**Step 2:**

**A screen shot of a computer

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**Step 3:**

**A black background with green text

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**Step 4:**

**A screen shot of a computer code

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**Step 5:**

**A screen shot of a computer program

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**Step 6:**

**A screen shot of a computer program

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**Step 7:**

**A screen shot of a computer code

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**Step 8 & 9:**

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**Step 10:**

class Employee {

    constructor(private currentProject: string, private name: string) { }

    getCurrentProject(): string {

        return this.currentProject;

    }

    getName(): string {

        return this.name;

    }

}

class Company {

    private employees: Employee[] = [];

    add(employee: Employee) {

        this.employees.push(employee);

    }

    getProjectList(): string[] {

        var projectList: string[] = new Array();

        for (let i = 0; i < this.employees.length; i++) {

            projectList.push(this.employees[i].getCurrentProject());

        }

        return projectList;

    }

    getNameList(): string[] {

        var namesList: string[] = new Array();

        for (let i = 0; i < this.employees.length; i++) {

            namesList.push(this.employees[i].getName());

        }

        return namesList;

    }

}

class Frontend extends Employee {

}

class Backend extends Employee {

}

var company: Company = new Company();

var frontend: Frontend = new Employee("Java", "Supriya");

var backend: Backend = new Employee("Python", "Pavan");

company.add(frontend);

company.add(backend);

company.getProjectList().forEach(project => console.log(project));

company.getNameList().forEach(name => console.log(name));

**Step 11:**

interface IEmployee{

    currentProject: string;

    name: string

    getCurrentProject(): string;

    getName(): string

}

class Company {

    private employees: IEmployee[] = [];

    add(employee: IEmployee) {

        this.employees.push(employee);

    }

    getProjectList(): string[] {

        var projectList: string[] = new Array();

        for (let i = 0; i < this.employees.length; i++) {

            projectList.push(this.employees[i].getCurrentProject());

        }

        return projectList;

    }

    getNameList(): string[] {

        var namesList: string[] = new Array();

        for (let i = 0; i < this.employees.length; i++) {

            namesList.push(this.employees[i].getName());

        }

        return namesList;

    }

}

class Frontend implements IEmployee {

    currentProject: string;

    name: string;

    constructor(currentProject:string,name:string){

        this.currentProject=currentProject;

        this.name=name;

    }

    getCurrentProject(): string {

        return this.currentProject;

    }

    getName(): string {

        return this.name;

    }

}

class Backend implements IEmployee {

    currentProject: string;

    name: string;

    constructor(currentProject:string,name:string){

        this.currentProject=currentProject;

        this.name=name;

    }

    getCurrentProject(): string {

        return this.currentProject;

    }

    getName(): string {

        return this.name;

    }

}

var company: Company = new Company();

var frontend: Frontend = new Frontend("Java", "Supriya");

var backend: Backend = new Backend("Python", "Pavan");

company.add(frontend);

company.add(backend);

company.getProjectList().forEach(project => console.log(project));

company.getNameList().forEach(name => console.log(name));

**Step 12:**

class Employee {

    constructor(private currentProject: string, private name: string) { }

    getCurrentProject(): string {

        return this.currentProject;

    }

    getName(): string {

        return this.name;

    }

}

interface ILocation{

    addPerson(employee: Employee):void;

    getPerson(index:number): Employee;

    getCount():number;

}

class Location1{

    constructor(private locationName:string){}

    getLocationName():string{

        return this.locationName;

    }

}

class CompanyLocationArray implements ILocation{

    private employees: Employee[] = [];

    addPerson(employee: Employee): void {

        this.employees.push(employee);

    }

    getPerson(index: number): Employee {

       if(index<this.getCount()){

        return this.employees[index];

       }else{

        throw new Error("Employee Not Found");

       }

    }

    getCount(): number {

        return this.employees.length;

    }

}

class CompanyLocationLocalStorage implements ILocation{

    private employees: Employee[] = [];

    addPerson(employee: Employee): void {

        this.employees.push(employee);

    }

    getPerson(index: number): Employee {

       if(index<this.getCount()){

        return this.employees[index];

       }else{

        throw new Error("Employee Not Found");

       }

    }

    getCount(): number {

        return this.employees.length;

    }

}

class Company {

    private employees: Employee[] = [];

    constructor(location: Location1){}

    add(employee: Employee) {

        this.employees.push(employee);

    }

    getProjectList(): string[] {

        var projectList: string[] = new Array();

        for (let i = 0; i < this.employees.length; i++) {

            projectList.push(this.employees[i].getCurrentProject());

        }

        return projectList;

    }

    getNameList(): string[] {

        var namesList: string[] = new Array();

        for (let i = 0; i < this.employees.length; i++) {

            namesList.push(this.employees[i].getName());

        }

        return namesList;

    }

}

var hyderabadCompany: Company = new Company(new Location1("Hyderabad"));

var chennaiCompany: Company = new Company(new Location1("Chennai"));

hyderabadCompany.add(new Employee("Java","Supriya"));

hyderabadCompany.add(new Employee("Python","Pavan"))

chennaiCompany.add(new Employee("Adobe","Keerthi"));

chennaiCompany.add(new Employee("ASE","Ramya"));

hyderabadCompany.getProjectList().forEach(project => console.log(project));

chennaiCompany.getProjectList().forEach(project => console.log(project));

hyderabadCompany.getNameList().forEach(name => console.log(name));

chennaiCompany.getNameList().forEach(name => console.log(name));