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Inheritance

Inheritance Exercise

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Exercise - Demonstrate your knowledge of inheritance.

Create contracts that adhere to the following specifications.

Contracts

Employee

Create an `abstract` contract called `Employee`. It should have:

A public variable storing `idNumber`

A public variable storing `managerId`

A constructor that accepts arguments for and sets both of these variables

A `virtual` function `Ask a question...` `Ctrl+I` `uint`

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Salaried

A contract called `Salaried`. It should:

Inherit from `Employee`

Have a public variable for `annualSalary`

Implement an `override` function for `getAnnualCost` that returns `annualSalary`

An appropriate constructor that performs any setup, including setting `annualSalary`

Hourly

Implement a contract called `Hourly`. It should:

Inherit from `Employee`

Have a public variable storing `hourlyRate`

Include any other necessary setup and implementation



The annual cost of an hourly employee is their hourly rate * 2080 hours.

Manager

Implement a contract called `Manager`. It should:

Have a public array storing employee ids

Include a function called `addReport` that can add id numbers to that array

Include a function called `resetReports` that can reset that array to empty

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Salesperson

Implement a contract called `Salesperson` that inherits from `Hourly` .

Engineering Manager

Implement a contract called `EngineeringManager` that inherits from `Salaried` and `Manager` .

Deployments

You'll have to do a more complicated set of deployments for this exercise.

Deploy your `Salesperson` and `EngineeringManager` contracts. You don't need to separately deploy the other contracts.

Use the following values:

Salesperson

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Hourly rate is 20 dollars an hour

Id number is 55555

Manager Id number is 12345

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Manager

Annual salary is 200,000

Id number is 54321

Manager Id is 11111

Inheritance Submission

Copy the below contract and deploy it using the addresses of your `Salesperson` and `EngineeringManager` contracts.

```
contract InheritanceSubmission {  
    address public salesPerson;  
    address public engineeringManager;  
  
    constructor(address _salesPerson, address _engineeringManager) {  
        salesPerson = _salesPerson;  
        engineeringManager = _engineeringManager;  
    }  
}
```

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Submit your Contracts and Earn an NFT Badge! (BETA)

! Hey, where'd my NFT go!?

Testnets are not permanent! Base Goerli will soon be sunset, in favor of Base Sepolia.

As these are separate networks with separate data, your NFTs **will not** transfer over.

Don't worry! We've captured the addresses of all NFT owners on Base Goerli and will include them when we release the mechanism to transfer these NFTs to mainnet later this year! You can also redeploy on Sepolia and resubmit if you'd like!

⚠ Submit your address for your copy of the `InheritanceSubmission` contract that contains your other contract addresses.

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