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// SPDX-License-Identifier: MIT
pragma solidity ^0.8.0;

contract CombinedFunctions
{
    uint public storedValue;

    // Constructor to initialize storedValue
    constructor()
    {
        storedValue = 10; // Initialize storedValue with 10
    }

    // View function to check the stored value
    function getStoredValue() public view returns (uint)
    {
        return storedValue;
    }

    // Pure function to add two numbers
    function addNumbers(uint a, uint b) public pure returns (uint)
    {
        return a + b;
    }

    // Payable function to receive Ether and update storedValue
    function receiveEtherAndUpdateValue(uint newValue) public payable
    {
        storedValue = storedValue+newValue;
    }
}

```

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// SPDX-License-Identifier: MIT
pragma solidity ^0.8.0;
contract VisibilityExample
{
    uint public publicValue = 10;
    uint internal internalValue = 20;
    uint private privateValue = 30;

    // Public function: Can be called externally and internally.
    function setPublicValue(uint newValue) public
    {
        publicValue = newValue;
    }

    // Internal function: Can only be called within the contract or derived
contracts.
    function updateInternalValue(uint newValue) internal
    {
        internalValue = newValue;
    }

    // Private function: Can only be called within this contract.
    function updatePrivateValue(uint newValue) private
    {
        privateValue = newValue;
    }

    // Public function that uses internal and private functions.
    function modifyValues(uint newInternalValue, uint newPrivateValue) public
    {
        updateInternalValue(newInternalValue); // Calls internal function
        updatePrivateValue(newPrivateValue); // Calls private function
    }

    // Public function to read internal and private variables
    function getInternalAndPrivateValues() public view returns (uint, uint)
    {
        return (internalValue, privateValue); // Reading internal and private
variables.
    }
}

```

```
// SPDX-License-Identifier: MIT
pragma solidity ^0.8.0;
contract ParentContract
{
    uint public parentValue;
    constructor()
    {
        parentValue = 100; // Setting a default value in the parent contract
    }

    function setParentValue(uint newValue) public
    {
        parentValue = newValue;
    }

    function getParentValue() public view returns (uint)
    {
        return parentValue;
    }
}

contract ChildContract is ParentContract
{
    function updateParentValue(uint newValue) public
    {
        setParentValue(newValue); // Calling the parent contract's function
    }
}
```

```
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```

```
contract RequireAndRevertExample
{
    uint public balance;
    constructor()
    {
        balance = 100; // Starting balance of 100
    }

    function withdraw(uint amount) public
    {
        require(amount <= balance, "Insufficient balance to withdraw");
        balance -= amount;
    }

    function deposit(uint amount) public
    {
        balance += amount;
    }

    function riskyOperation(uint riskAmount) public
    {
        if (riskAmount > 50)
        {
            revert("Operation too risky. Aborting transaction.");
        }

        balance -= riskAmount;
    }
}
```