

Contract Structure - State Variables

```
pragma solidity >=0.4.0 <0.6.0;  
  
contract SimpleStorage {  
    uint storedData; // State variable  
    // ...  
}
```

Contract Structure - Functions

```
pragma solidity >=0.4.0 <0.6.0;

contract SimpleAuction {
    function bid() public payable { // Function
        // ...
    }
}
```

Contract Structure - Function Modifiers

```
pragma solidity >=0.4.22 <0.6.0;

contract Purchase {
    address public seller;

    modifier onlySeller() { // Modifier
        require(
            msg.sender == seller,
            "Only seller can call this."
        );
        _;
    }

    function abort() public view onlySeller { // Modifier usage
        // ...
    }
}
```

Contract Structure - Events

```
pragma solidity >=0.4.21 <0.6.0;

contract SimpleAuction {
    event HighestBidIncreased(address bidder, uint amount); // Event

    function bid() public payable {
        // ...
        emit HighestBidIncreased(msg.sender, msg.value); // Triggering event
    }
}
```

Contract Structure - Struct Types

```
pragma solidity >=0.4.0 <0.6.0;
```

```
contract Ballot {  
    struct Voter { // Struct  
        uint weight;  
        bool voted;  
        address delegate;  
        uint vote;  
    }  
}
```

Contract Structure - Enum Types

```
pragma solidity >=0.4.0 <0.6.0;  
  
contract Purchase {  
    enum State { Created, Locked, Inactive } // Enum  
}
```