Flowchart for ERC Token generation contract.

The function allows the spender to spend tokens from the sender’s account. (Transfers tokens from sender’s account to spender’s account)

The function allows the participants to check for the amount that spender it allowed to spend from the owner’s account.

The function gives the approval to a participant to access certain amount of sender’s tokens.

Approve Function

The function transfers amount from sender to recipient and emits the event of transfer.

The function gives the balance of given account

The function defines the actual tokens in circulation

Total supply – (burned or destroyed tokens)

Defining the symbol, name and total supply of token

Transfer Function

Balance Of Function

Total Supply Function

Contract Initialization

Transfer From Function

Allowance Function

**All functions:**

**Total Supply Function:**

1. Start
2. Return total supply – balance[address(0)]

Total supply = Total supply – (Burned or destroyed coins)

1. End

**Balance of Function:**

1. Start
2. Read balance for the given account
3. Return balance
4. End.

**Transfer Function:**

1. Start
2. Take recipient address and amount as input
3. Subtract amount form sender’s account balance add amount to recipient’s balance.
4. Emit the transfer event.
5. Return true to show transfer successful
6. End

**Approve Function**

1. Start
2. Take spender address and amount as input
3. Set the allowance for the spender of the spender to the specified amount.
4. Emit Approval event.
5. Return true to detect successful approval
6. End

**Transfer From Function**

1. Start
2. Take input sender address, recipient address and amount,
3. Subtract amount from the sender’s account
4. Subtract amount from the allowance of sender to caller
5. Add the amount to recipient.
6. Emit transfer event
7. Return true.
8. End

**Allowance**

1. Start
2. Take input as sender’s address, recipient’s address
3. Read the allowance for the sender’s and recipient
4. Return allowance.
5. End.