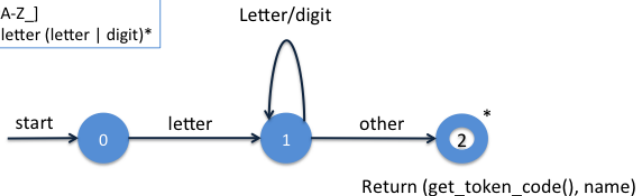


# Transition Diagram for Identifiers and Reserved Words

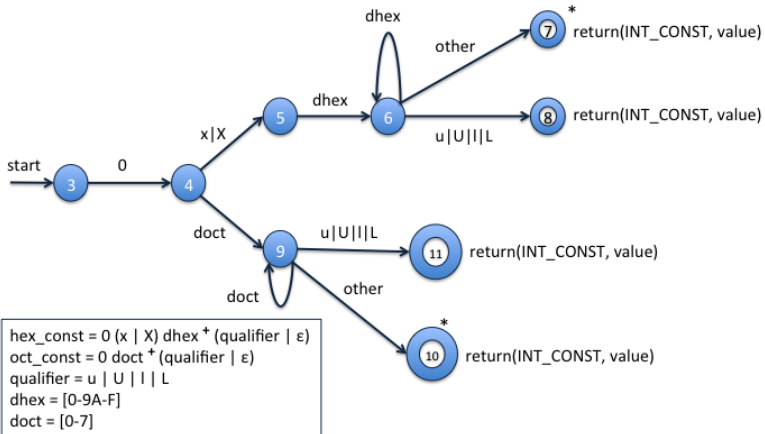
letter = [a-zA-Z\_]

Identifier = letter (letter | digit)\*



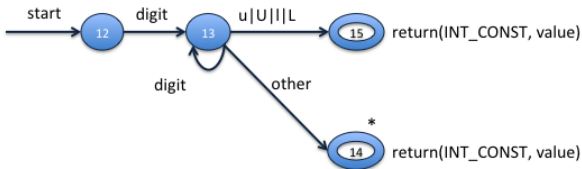
- '\*' indicates retraction state
- `get_token_code()` searches a table to check if the name is a reserved word and returns its integer code, if so
- Otherwise, it returns the integer code of IDENTIFIER token, with name containing the string of characters forming the token (name is not relevant for reserved words)

# Transition Diagrams for Hex and Oct Constants

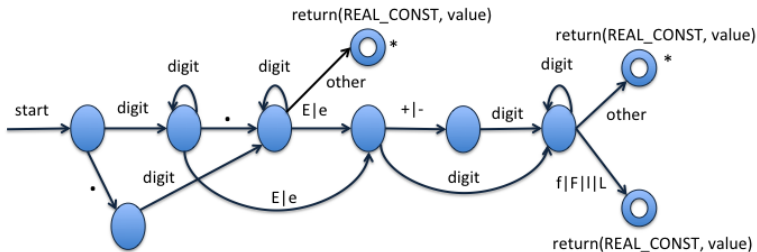


# Transition Diagrams for Integer Constants

$\text{int\_const} = \text{digit}^+ (\text{qualifier} \mid \epsilon)$   
 $\text{qualifier} = \text{u} \mid \text{U} \mid \text{l} \mid \text{L}$   
 $\text{digit} = [0-9]$



# Transition Diagrams for Real Constants



```

real_const = (digit+ exponent (qualifier | ε)) |
             (digit* "." digit+ (exponent | ε) (qualifier | ε)) |
             (digit+ "." digit* (exponent | ε) (qualifier | ε))
exponent = (E|e)(+|-|ε) digit+
qualifier = f | F | I | L
digit = [0-9]
    
```

# Transition Diagrams for a few Operators

