

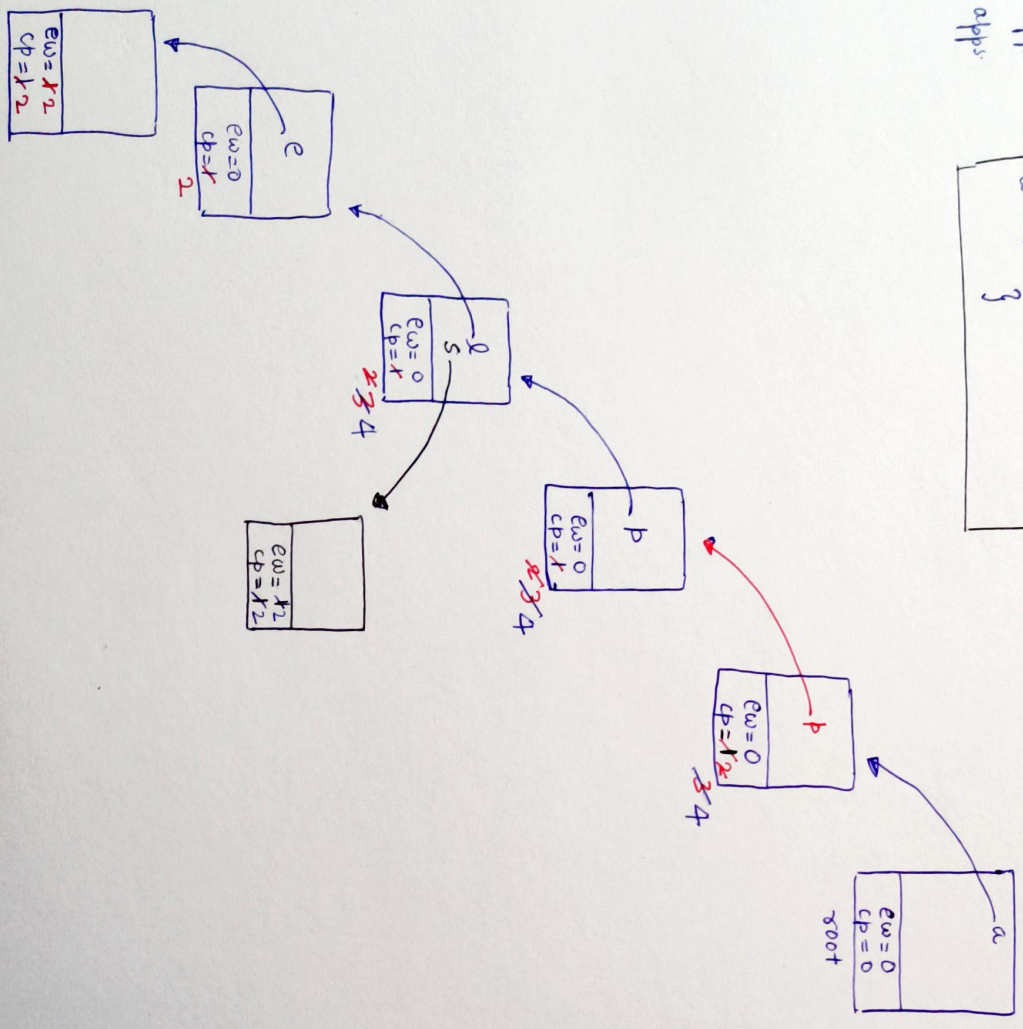
Trie → INSERT() | Counts words Equal To() | Count words Starting With() | erase() } → Delete the given word from trie.

- apple
- apple
- apples
- apples

Trie {  
 link [26];  
 end with →  $ew = 0$   
 count prefix →  $cp = 0$   
 }

return how many times the given word is present in Trie

return how many words are there in this Trie that have the string PREFIX as a prefix.





## Class Node

public:

Node \*link[26];

int ew = 0; // ends with

int cp = 0; // count-prefix

bool contain (char ch)

{ return link[ch - 'a'] != NULL;

}

void put (char ch, Node \*node)

{ link[ch - 'a'] = node;

}

void \*get (char ch)

{ return link[ch - 'a'];

}

int get-ew();

{ return ew;

}

int get-cp();

~~int~~ inc-ew();

inc-cp();

dec-ew();

dec-cp();

## Class Trie

Node \*root;

public:

Trie() {

root = new Node();

}

void insert (string &word)

{ Node \*node = root;

for (int i = 0; i < word.size(); i++)

{ if (!node -> contain(word[i]))

{ node -> put(word[i], new Node());

}

node = node -> get(word[i]);

node -> inc-cp();

}

node -> inc-ew();

}



```

int countWordsEqualTo ( string fword)
{
    Node * node = root;

```

```

    for (int i=0; i<word.size(); i++)
    {

```

```

        if (!node->contain (word[i])) return 0;

```

```

        node = node->get (word[i]);
    }

```

```

    return node->getEnd();
}

```

```

int countWordsStartingWith (string fword)
{

```

```

    Node * node = root;

```

```

    for (int i=0; i<word.size(); i++)
    {

```

```

        if (!node->contain (word[i])) return 0;

```

```

        node = node->get (word[i]);
    }

```

```

    return node->get-cp();
}

```

```

void erase (string fword)
{

```

```

    Node * node = root;

```

```

    for (int i=0; i<word.size(); i++)
    {

```

```

        if (!node->contain (word[i])) to return;

```

```

        node = node->get (word[i]);

```

```

        node->dec-cp();
    }

```

```

    node->dec-end();
}

```