



```
CLASS Trie Node
char letter;
Trie Node parent;
int depth;
char* [26] child_alphabet; //initialise with 26 elements val oo
vector <int>word_lengths;
bool terminator
vector <int> q_exact_match //query_ids of exact_match queries containing this word
vector <int> q_hamming_1 //query_ids of hamming_match_1 queries containing this word
vector <int> q_hamming_2 //query_ids of hamming_match_2 queries containing this word
vector <int> q_edit_1 //query_ids of edit_distance_1 queries containing this word
vector <int> q_edit_2 //query_ids of edit_distance_2 queries containing this word
}

vector <int> matching_docs //do we need this?

- void check_match_valid (query_id, match_type) {
// look up query_Id in list of eliminated queries
// if it is there, delete it from match_type
// this way we don't need to delete eliminated entries.
// OPTIMISATION=>may need to reconsider for deleting eliminated entries.
}

-void match_found (doc_id, query_id) {
decrement the doc_id query_index
}

-void add_char (query_char, query_id, match_type, match_dist) {
//adding the next character from a new query word;

if (query_char == \0) { //we've reached the end for this query word
//reached word termination
switch (match_type){
case exact_match:
push_back(q_exact_match, query_id);
break;
case hamming_match:
if (match_dist == 1) push_back (q_hamming_1, query_id)
else push_back (q_hamming_2, query_id)
break;
case edit_distance:
if (match_dist == 1) push_back (q_edit_1, query_id)
else push_back (q_edit_2, query_id)
break;
}

} else { // not yet terminating

if (child_alphabet[char]==oo) {
new Trie Node [query_char]
}
TrieNode* node = child_alphabet[char];

node::add_char (query_char+1, query_id, match_type, match_dist)
}
}

- void log_node_depths {
//when we have reached the final insert of a new query_word,
//only then do we know our word length.
//Npw climb back up the tree to register word_length with every parent node.
//we use this info at every node to work out whether to explore the tree further
//(eg if doc-word length is 8 but following this node only yields
//query words max 6 length, don't bother)
parent add_word_length[self.depth]

}

- int depth {
if (!_depth) {
_depth = parent.depth+1;
}
return _depth;
}
}
```