

CHATBOT APPLICATION

PROGRAM:

```
#include <iostream>
#include <string>
#include <vector>
#include <ctime>

const int MAX_RESP = 3;

typedef std::vector<std::string> vstring;

vstring find_match(std::string input);
void copy(char *array[], vstring &v);

typedef struct {
    char *input;
    char *responses[MAX_RESP];
}record;

record KnowledgeBase[] = {
    {"WHAT IS YOUR NAME",
     {"MY NAME IS CHATTERBOT2.",
      "YOU CAN CALL ME CHATTERBOT2.",
      "WHY DO YOU WANT TO KNOW MY NAME?"}},
    {"HI",
     {"HI THERE!",
      "HOW ARE YOU?",
      "HI!"}},
    {"HOW ARE YOU",
     {"I'M DOING FINE!",
      "I'M DOING WELL AND YOU?",
      "WHY DO YOU WANT TO KNOW HOW AM I DOING?"}},
    {"WHO ARE YOU",
     {"I'M AN A.I PROGRAM.",
      "I THINK THAT YOU KNOW WHO I'M.",
      "WHY ARE YOU ASKING?"}},
    {"ARE YOU INTELLIGENT",
     {"YES, OFCORSE.",
      "WHAT DO YOU THINK?",
      "ACTUALLY, I'M VERY INTELLIGENT!"}},
    {"ARE YOU REAL",
```

```

        {"DOES THAT QUESTION REALLY MATERS TO YOU?",
         "WHAT DO YOU MEAN BY THAT?",
         "I'M AS REAL AS I CAN BE."}
    }
};

size_t nKnowledgeBaseSize = sizeof(KnowledgeBase)/sizeof(KnowledgeBase[0]);

int main() {
    srand((unsigned) time(NULL));

    std::string sInput = "";
    std::string sResponse = "";

    while(1) {
        std::cout << ">";
        std::getline(std::cin, sInput);
        vstring responses = find_match(sInput);
        if(sInput == "BYE") {
            std::cout << "IT WAS NICE TALKING TO YOU USER, SEE YOU NEXTTIME!" <<
std::endl;
            break;
        }
        else if(responses.size() == 0) {
            std::cout << "I'M NOT SURE IF I UNDERSTAND WHAT YOU ARE TALKING
ABOUT."
                        << std::endl;
        }
        else {
            int nSelection = rand() % MAX_RESP;
            sResponse = responses[nSelection]; std::cout << sResponse <<
std::endl;
        }
    }

    return 0;
}

// make a search for the user's input
// inside the database of the program
vstring find_match(std::string input) {
    vstring result;
    for(int i = 0; i < nKnowledgeBaseSize; ++i) {
        if(std::string(KnowledgeBase[i].input) == input) {
            copy(KnowledgeBase[i].responses, result);
            return result;
        }
    }
    return result;
}

void copy(char *array[], vstring &v) {
    for(int i = 0; i < MAX_RESP; ++i) {
        v.push_back(array[i]);
    }
}

```

OUTPUT:

Output

```
/tmp/cEKe0ZqGln.o
```

```
>HI
```

```
HI THERE!
```

```
>HOW ARE YOU
```

```
WHY DO YOU WANT TO KNOW HOW AM I DOING?
```

```
>WHO ARE YOU
```

```
I THINK THAT YOU KNOW WHO I'M.
```

```
>ARE YOU REAL
```

```
DOES THAT QUESTION REALLY MATERS TO YOU?
```

```
>ARE YOU INTELLIGENT
```

```
YES, OFCORSE.
```

```
>|
```