In [1]:
```
/*Reches P. Eric K.
04/10/2023
Lab 4 1.0*/
```

In [2]:
```
#include <iostream>
#include <string>
using namespace std;

string story_names[] = {"Little Red Riding Hood","Spider-Man","Rock Concerts","Kim Kar
string stories[] = {"\"Little Red Riding <::nn/>\" is a/an <::jj/> fairy tale for your
string hints[20];
string words[20];

/*
The following are the hint types and their descriptions:

HINT TYPE       DESC
_________       ____
animal:         name of an animal
animal_plural:  plural of an animal
body:           name of a part of the human body
body_plural:    plural of a part of the human body
food:           type of food
food_plural:    plural of a type of food
jj:             adjective
liquid:         type of liquid
nn:             noun
nns:            plural noun
rb:             adverb
vb:             verb, base form
vbd:            verb, past tense
vbg:            verb gerund or present participle (i.e. verb ending in "ing")
vbn:            verb, past participle
vbz:            verb, 3rd person singular present (i.e. verb ending in "s")

Here they are in a convenient format:
Hints: "animal","animal_plural","body","body_plural","food","food_plural","jj","liquia
Descriptions: "name of an animal","plural of an animal","name of a part of the human b

*/
```

In [3]:
```
string getDescription(string hint){
    //TODO: Complete this function!
    string miss_hint = "missing hint type";
    string HINTS[] = {"animal","animal_plural","body","body_plural","food","food_plura
    string Descript[] = {"name of an animal","plural of an animal","name of a part of
    for (int i = 0; i < 16; i++){
        if (hint == HINTS[i]){
            return Descript[i];
        }
    }
    return miss_hint;
}
```

In [4]:
```
getDescription("vbg");
```

In [5]:
```
string getHint(string tag){
    //TODO: Complete this function!
    int num_tag = tag.length()-4;
    return tag.substr(3,num_tag);
}
```

In [6]:
```
getHint("<::wrwr/>");
```

In [7]:
```
//Populate hints array with the correct hints
//return the number of hints
int fillHints(string story){
    //TODO: Complete this function!
    int i = 0;
    bool story_end = false;
    while(story_end != true){
        story = story.substr(story.find('<'),story.length());
        int start = story.find('<');
        int end = story.find('>');
        string tag = story.substr(start,(end - start));
        string hint = getHint(tag);
        hints[i] = getDescription(hint);
        i++;
        story = story.substr(end,(story.length()- end));
        // cout << i;
        if (story.find('<') == string::npos){
            story_end = true;
        }
    }
    return i;
}
```

In [8]:
```
fillHints(stories[0]);
```

In [9]:
```
string modifyStory(string story, int hint_count){
    //TODO: Complete this function!
    for(int i = 0; i < hint_count; i++){
        int tag_len = (story.find('>')-story.find('<')) + 1;
        story.replace(story.find('<'),tag_len,words[i]);
    }
    return story;
}
```

In [10]:
```
modifyStory(stories[0],15);
```

In [11]:
```
void madLibs(){
    //TODO: Complete this function!
    cout << "Please choose a number between 1 and 40\n";
    int story_number;
    cin >> story_number;
    story_number = story_number - 1;
    int number_hints = fillHints(stories[story_number]);
    for(int i = 0; i < number_hints; i++){
```

```
        cout << hints[i] << "\n";
        cin >> words[i];
    }
    cout << story_names[story_number] << "\n";
    cout << modifyStory(stories[story_number], number_hints);
}
```

In [12]:
```
madLibs()
```

```
Please choose a number between 1 and 40

noun

adjective

adjective

type of food

verb, base form

plural noun

verb, base form

adverb

verb, 3rd person singular present (i.e. verb ending in 's')

adjective

plural noun

verb gerund or present participle (i.e. verb ending in 'ing')

noun

noun

verb, 3rd person singular present (i.e. verb ending in 's')

Little Red Riding Hood
"Little Red Riding m;lm;" is a/an ,', fairy tale for young children.
It is a story about a/an , girl and a wolf.
The girl's mother sends her to take . to her sick grandmother.
The mother tells her she must not ..\ on the way.
A wolf sees the girl walking through the l and makes a plan to ; her.
The wolf ; asks the girl where she is going.
The girl ; him, because he seems ;;.
Then the wolf tells her to pick some ;; for her grandmother.
While she is ;; flowers, the wolf goes to her grandmother's house and eats her.
He puts on the grandmother's ;\ and gets into her bed.
When the girl arrives at her grandmother's house, she gets into ; with the wolf.
The wolf leaps upon the child and ;;; her.
```

In [ ]: