

**Instituto Tecnológico y de
Estudios Superiores de Monterrey**

Campus Querétaro

Curse

The Prolog Text Adventure

Documentation

Programming Languages
August – December 2020

Eduardo González Melgoza
A01701446

Index

What Is A Text Adventure?	3
Objective	4
Result	4
Functionality	4
dynamic/1	4
assert/1	5
retract/1	5
retractall/1	6
discontiguous/1	7
How to Play	7
Output Format	7
Controls	9
Context	9
Current Location	9
Interacting With NPCs and Objects	10
Nearby Locations	11
Setup	12
Walkthrough	13
Beginning	13
Church Plaza	14
Main Plaza	15
Eadburgh Inn	17
Swamp	17
Old Cabin	18
Cypress Tree Family	20
Church Altar Room	20
Study	21
Your House	22
Church Basement	22
World Map	24
Bibliography	25

What Is A Text Adventure?

Text adventures, also referred to as interactive fictions, date back to the year 1976. They are a form of software in which the user is presented with a text-based description of various environments, situations and/or characters. These elements can be interacted with and influenced using simple text commands. Interactive fictions are also viewed as a form of video games, usually belonging to the adventure games or role-playing game (RPGs) genres, thanks to the nature of their functionality. In text adventure games, the player normally takes on the role of a main character in the narrative, interacting by first reading what the program describes, and then inputting a command congruent to what is outputted onto the screen.

Even though these games lack a use of a graphic interface, there is a physical dimension in which the game takes place. In-game descriptions include imagery of the player's surroundings, such as the current room, interactive items and other non-player characters (NPCs). The player can input commands such as "go north" or "take object" to move from one room to another or interact with the characters and objects in each room, prompting the program to give a feedback description of how the world changes as the player affects the environment. Some notable examples of famous text adventures include Colossal Cave Adventure (1976), the Zork series (1980, 1981, 1982) and Cypher. [Figure 1](#) shows a screenshot taken from an online version of Zork I¹. In it, the gameplay can be appreciated, the player's input is shown after the '>' and the game feedback and descriptions follow each given command.

```
Living Room                                     Score: 15   Moves: 23
>take water
You can't reach something that's inside a closed container.

>take bottle
Taken.

>go west
Living Room
You are in the living room. There is a doorway to the east, a wooden door with
strange gothic lettering to the west, which appears to be nailed shut, a
trophy case, and a large oriental rug in the center of the room.
Above the trophy case hangs an elvish sword of great antiquity.
A battery-powered brass lantern is on the trophy case.

>take rug
The rug is extremely heavy and cannot be carried.

>open case
Opened.

>take sword
Taken.

>
```

[Figure 1](#)

¹ <https://classicreload.com/zork-i.html>

Objective

The objective of this project is to apply and expand on the acquired knowledge of the logic programming paradigm to design and code a functional text adventure. The game will be coded using the Prolog programming language.

Result

The project resulted in a text adventure game named Curse (the source file's name is `curse.pl`). Curse is a fantasy adventure RPG text adventure game with light horror elements. It was coded using the Prolog programming language and the logic programming paradigm. The player can advance through the game's plot by inputting some of the classic commands also present in other famous text adventures like the "look." command to look about the player's surroundings or "i." to check their inventory. The game has a concrete plot, an objective and an ending.

Functionality

Since Curse was programmed in Prolog, the functionality of the game is based on a series of rules and facts, as well as unification of different values to various variables. To understand the basic concepts of Prolog, a tutorial for beginners is available in the following link: http://www.doc.gold.ac.uk/~mas02gw/prolog_tutorial/prologpages/. This tutorial will explain some central concepts like facts, arguments, unification and recursion, as well as interactive examples that will help get a better understanding of them.

In the source code of Curse, there are some techniques and predicate properties being used that are not explained in the aforementioned tutorial. These techniques work as follows:

dynamic/1

`dynamic/1` is a predicate property that indicates that the definition of the indicated predicate may change during execution. To cycle between the various possible definitions of a dynamic predicate, the use of the `assert/1` and `retract/1` terms is needed. An example of `dynamic/1` can be observed in line number six of the `curse.pl` source file.

```

5
6 :- dynamic actual_position/1, at/2, holding/1, talked/1, examined/1, time/1.
7 :- retractall(at(_, _)), retractall(actual_position(_)), retractall(alive(_)).

```

Figure 2

Figure 2 shows the sixth line of Curse's source code. The predicate property `dynamic/1` is being used to modify the predicates `actual_position/1`, `at/2`, `holding/1`, `talked/1`, `examined/1` and `time/1`.

assert/1

`assert/1` is a meta-predicate in Prolog that adds the argument it receives to the Prolog knowledge base. It is useful when a new rule or fact needs to be added to the knowledge base during the execution of a Prolog program. It is important to note that it can only be applied to dynamic predicates. It has two variants: `asserta/1` and `assertz/1`. The former pushes its argument to the beginning of the knowledge base, while the latter adds it at the end. Though deprecated, `assert/1` functions the same way as `assertz/1`. A use case example for `assert/1` is shown below:

```

?- assert(rich(mary)).
true.

?- rich(mary).
true.

?- assert((happy(X) :-
           rich(X),
           healthy(X))).

?- assert(healthy(mary)).
true.

?- happy(X).
X = mary

```

retract/1

`retract/1` is a meta-predicate in Prolog that removes the argument it receives from the Prolog knowledge base. It works in conjunction with `assert/1`, making it important to note

that it can only be applied to dynamic predicates as well. A use case example for `retract/1` is shown below:

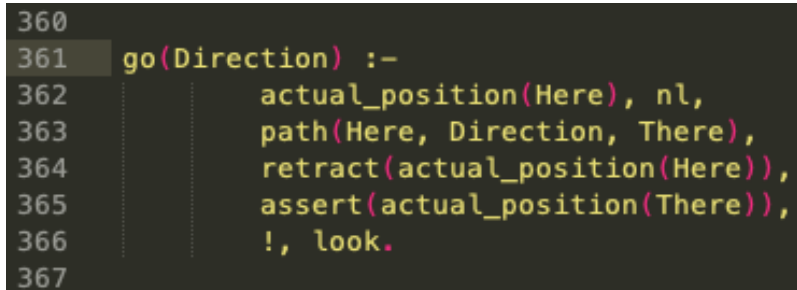
```
?- assert(likes(mary, pizza)).
true.

?- likes(mary, pizza).
true.

?- retract(likes(mary, pizza)).
true.

?- likes(mary, pizza).
false.
```

`assert/1` and `retract/1` are both used various time throughout the source file of Curse. [Figure 3](#) shows an example of a situation in which they are used.



```
360
361 go(Direction) :-
362     actual_position(Here), nl,
363     path(Here, Direction, There),
364     retract(actual_position(Here)),
365     assert(actual_position(There)),
366     !, look.
367
```

Figure 3

Here, `assert/1` and `retract/1` work together to change the players current position, retracting is previous position fact from the knowledge base and asserting the new one.

retractall/1

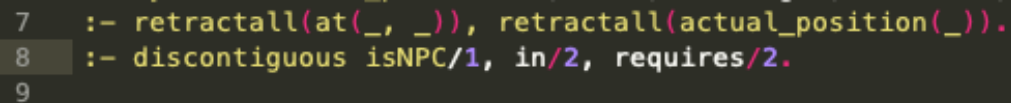
`retractall/1` functions in the same manner as `retract/1`, except it eliminates from the knowledge base all of the predicates that match its argument. [Figure 4](#) shows the usage of `retractall/1` in the source code of Curse. In this instance, it is being used to clean the knowledge base before assigning actual definitions to some of the dynamic predicates.

discontiguous/1

`discontiguous/1` is a meta-predicate that indicates that the defining clauses of the predicate that it receives as argument, are not restricted to be consecutive, whereas they can appear anywhere in the source file. This is an example of how to use `discontiguous/1`:

```
:- discontiguous dog/1.  
  
dog(spike).  
cat(mittens).  
cat(tabby).  
dog(spot).
```

In this example, the different predicates for `dog` are not defined one after the other. Without the first line of the example, this would output a warning. In the source file for *Curse*, `discontiguous/1` is used as follows:

A screenshot of a Prolog source file showing three lines of code. Line 7: `:- retractall(at(_, _)), retractall(actual_position(_)).` Line 8: `:- discontiguous isNPC/1, in/2, requires/2.` Line 9: (empty line). The code is displayed in a dark-themed editor with syntax highlighting.

```
7  :- retractall(at(_, _)), retractall(actual_position(_)).  
8  :- discontiguous isNPC/1, in/2, requires/2.  
9
```

Figure 4

Figure 4 shows how `discontiguous/1` is being applied to the `isNPC/1`, `in/1` and `requires/1` predicates.

How to Play

Output Format

Curse's output will always be formatted in a specific way. To explain its format, the game's first output will be used as an example below:

```
-----  
Enter commands using standard Prolog syntax.  
start.                to start the game.  
n. s. e. w.           to move in given direction.  
take(Object).         to pick up an object.  
talk(Character).       to talk to other characters.  
i.                    to check your inventory.
```

```
look.                to look around you again.
controls.            to show controls again.
halt.                to end game and quit.
```

The year is 1310. You are the town of Eadburgh's local priest.
Lately, people have been disappearing, there have been rumors of a
vampiric curse menacing the town. You can trust no one.

The time is late at night when you hear someone knocking at your door...
asking for help. As the priest, you cannot deny help to townspeople.
You open the door to find a cloaked figure who suddenly attacks you,
too fast to even try to defend yourself!

While lying on the floor, you notice the cloaked figure stepping inside
the church
closing the doors behind it.

You black out...

You wake, lying on the floor before your church. You feel an acute pain
to the neck. You touch it with your fingers to discover you have been
bitten! "I've been cursed with vampirism", you figure, "I've got to
find a way to revert the curse, and kill whatever thing cursed me."

You are in the church plaza.

You can hear violent noises coming from inside the church.

- To the north is the church.
- To the south is the main plaza.
- To the west is your house.

The various parts in which the output is divided are the following:

1. Controls
2. Context
3. Current location
4. Nearby locations

Controls

The Controls Section is automatically shown only upon inputting the `start` command; it will be the first section to be printed on the console. Afterwards, the player can input the command `controls` whenever they wish to display this section again.

Context

The Context Section is only accessible through the `start` command. It will give the player information about how the story begins, and how the main character got to the point of the story in which it begins. After the game starts, there should be no need to use the `start` command again, which is why this section can only be accessed to once in each playthrough to allow for the correct functioning of the game.

Current Location

This section, along with the Nearby Locations section, will be the ones that the player will see most often during gameplay. Whenever the player moves to a new location in the game's world, the Current Location section will be displayed before anything else. It will display a short description of the location in which the player currently is.

Some locations will have either objects laying around or NPCs with which the player can interact in different ways. These objects or characters will be displayed one after the other following the location's description.

Whenever the player wishes to consult their current location again, this can be done by using the `look` command. The current location will be displayed again, followed by the contents of the Nearby Locations section.

The following image shoes an example of how the `look` command is used in game:

```

?- look.
You are in the church plaza.
You can hear violent noises coming from inside the church.

- To the north is the church.
- To the south is the main plaza.
- To the west is your house.
-----
true.

```

Figure 5

Interacting With NPCs and Objects

To interact with non-player characters, the `talk` command is used, followed by the name of the character to interact with in between parentheses. After talking with them, NPCs will drop items that the player can take using the `take` command, followed by the name of the object to interact with between parentheses. Objects that are already laying in a certain location can also be interacted with using the `take` command.

There are certain items that can only be taken by trading them for a specific object. To interact with tradable items, use the `take` command followed by the name of the object to interact with between parentheses. The trade will only proceed if the specific required object is found in the player's inventory.

Figure 6 displays an example of how the `talk` and `take` commands are used in the game:

```

You are at the inn.
You love the welcoming atmosphere this place always has.

There is a bartender here.

- To the west is the exit to main plaza.
-----
true.

?- talk(bartender).
Bartender: Evenin' Reverend! Woah, you're lookin' a wee bit under the weather tonight.
Will you be having the usual? Red wine and the body of the Lord?
Beer? Didn't even know you liked it!
Anyway, this one's on the house! Sure hope it makes you feel better! Or at least look better...

Bartender placed a beer_tankard on the counter for you to take.

true.

?- take(beer_tankard).
Took the beer_tankard
true.

```

Figure 6

Please note that objects offered to the player by NPCs will not appear as items present in a given location if the player has not spoken to the NPC beforehand. In the same manner, if an NPC offers an item to the player, and before taking it, the player executes the `look` command, the offered item will be displayed as one of the items found in the current location.

Nearby Locations

The Nearby Locations section will always be displayed after the Current Location section. Due to this, the player can access this information by running the `look` command whenever they wish. This section displays information on the various locations that can be accessed to from the current location, by moving in each given direction. If there is nowhere to go by moving in a certain direction of the four possible ones (north, south, east and west), this direction will not be displayed in the possible movable directions. Also, if the player attempts to move in a non-existent direction, a feedback message informing this will be shown.

During the events of Curse, some locations exist but may not be accessible until a certain condition is met or a certain item has been acquired. These locations will be effectively shown using the `look` command, however, if the condition for moving in that direction is not met yet, a message will inform this.

The following image shows the event in which the player attempts to move into a location which is restricted since the condition to pass has not yet been met:

```
You are in the main plaza,  
Everything is quiet.  
  
There is a beggar here.  
  
- To the north is the church plaza.  
- To the south is the town's exit. Following the path leads to the swamp  
- To the east is the inn.  
-----  
true.  
  
?- s.  
  
"The swamp is a dangerous area to navigate without something or someone to guide me through it."  
You cannot go that way.  
true.
```

Figure 7

Setup

To be able to play Curse, it is recommended to run the code using the SWI-Prolog IDE. This is available to be downloaded from the following link: <https://www.swi-prolog.org/download/stable>. Please note that there exists an online version of SWI-Prolog, however, this version does not allow for the adequate functionality to work properly². Once SWI-Prolog has been installed, running it should open a window like the one shown in [figure 8](#) (screenshot taken on macOS).

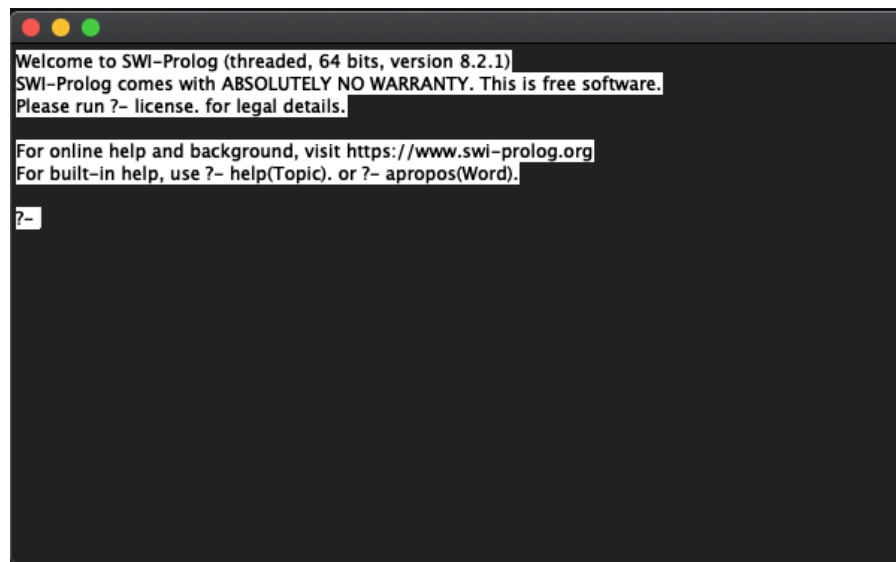


Figure 8

Due to the nature of the Prolog language, the game's code is a series of predicates that have to be consulted and queried in order to play through it. To load the game's source code file into SWI-Prolog and start playing, run the following command, using the absolute path of where the source file is saved:

```
?- consult('<file/absolute/path.pl>').
```

Example:

```
?- consult('/Users/lalogonzalez/repos/Curse/curse.pl').
```

² The game works by asserting and retracting the different predicate definitions, and this does not work properly in the online IDE.

Walkthrough

Beginning

To begin to play Curse, the aforementioned setup must be completed prior to beginning. Once the setup is done, enter the following command to start the game:

```
?- start.
```

After the command has been executed (which in reality is a query), the game controls will be explained, followed by the initial game scenario description. The following output should be displayed:

```
-----  
Enter commands using standard Prolog syntax.  
start.                to start the game.  
n.  s.  e.  w.        to move in given direction.  
take(Object).         to pick up an object.  
talk(Character).      to talk to other characters.  
i.                    to check your inventory.  
look.                 to look around you again.  
controls.             to show controls again.  
halt.                 to end game and quit.  
-----
```

```
The year is 1310. You are the town of Eadburgh's local priest.  
Lately, people have been disappearing, there have been rumors of a  
vampiric curse menacing the town. You can trust no one.
```

```
The time is late at night when you hear someone knocking at your  
door...  
asking for help. As the priest, you cannot deny help to townspeople.  
You open the door to find a cloaked figure who suddenly attacks  
you,  
too fast to even try to defend yourself!
```

```
While lying on the floor, you notice the cloaked figure stepping  
inside the church  
closing the doors behind it.
```

```
You black out...
```

You wake, lying on the floor before your church. You feel an acute pain
to the neck. You touch it with your fingers to discover you have
been
bitten! "I've been cursed with vampirism", you figure, "I've got
to
find a way to revert the curse, and kill whatever thing cursed me."

You are in the church plaza.
You can hear violent noises coming from inside the church.

- To the north is the church.
 - To the south is the main plaza.
 - To the west is your house.
-

Church Plaza

You are in the church plaza.
You can hear violent noises coming from inside the church.

- To the north is the church.
 - To the south is the main plaza.
 - To the west is your house.
-

The player starts the game off in the Church Plaza. From this area, there are three possible paths to take, two of which are not yet accessible to the player. To the north is the entrance to the Church, however, if the player attempts to move in this direction, the following feedback message will be displayed:

Are you crazy? Attempting to enter a holy place with a vampiric
curse laid upon yourself.
You would burn whole!
You cannot go that way.

In addition, the player will fail to move in direction to the north. To make it possible for the player to move north into the Church, the player must advance through the game's events to find the `doll` item. Another possible direction is west, into the player character's house. This direction is also inaccessible for the time being, attempting to move west from the Church Plaza will display the following message:

```
"It's locked. I left the key in my study in the left wing of the
church.
I need to find a way to get inside..."
You cannot go that way.
```

To be able to move west from this location, the player first needs to retrieve the `house_key` item from the Study. The player will fail to move west, leaving south as the only possible direction to move in.

Main Plaza

```
You are in the main plaza,
Everything is quiet.
```

```
There is a beggar here.
```

```
- To the north is the church plaza.
- To the south is the town's exit. Following the path leads to the
  swamp
- To the east is the inn.
-----
```

South to the Church Plaza is Eadburgh's Main Plaza. From this location, the possible paths to take are north, back into the Church Plaza, east into the town's local Inn and exit south into the Swamp. At this point the Swamp is inaccessible, attempting to move in this direction will display the following message:

```
"The swamp is a dangerous area to navigate without something or
someone to guide me through it."
You cannot go that way.
```

In the Main Plaza, the player will find the first NPC, a beggar. Like with every other non-player character, the player can interact with the beggar by using the `talk` command. Doing this will display the following dialogue:

```
Beggar: What's the matter Reverend? Can't go inside your church?
I'll tell you what. I heard an old hag lives in the swamp south to
Eadburgh.
They call her Old Jezabelle. She might be able to help you with
your... situation.
```

Oh, but you won't get there so easily. You will need a compass to traverse those wetlands.
Luckily for you, I've got one right here. Sure, you can have it...
What? You thought I would give it away so easily? Gwahaha
FOOD? CLOTHES? Do I look like a charity case to you?
BEER IS WHAT I WANT! Go get me some delicious beer from the Inn and I'll give you my compass.

The beggar offered a compass for you to take in exchange for some beer.

After talking with the beggar, he will drop a compass in the Main Plaza. If the player uses the `look` command, the compass should appear as one of the objects/people in the current location. The player cannot take the compass yet, that is until they find some beer to trade it for the compass.

Since the only possible direction that the player can move to other than going back to the Church plaza is east into the Inn, this is the next area that should be visited. Please note that there will be no conflicts if the player visits the Inn even before talking to the beggar.

(Once the Beer Tankard is Obtained)

After the player has found a `beer_tankard` in the Inn and is holding it in their inventory, they can now use the `take` command on the compass to trade it for the `beer_tankard`, doing so will display the following dialogue and feedback:

Beggar: Took you long enough. Yes yes take it, just give me my beer.

Handed the `beer_tankard` to the beggar.
Took the compass.

Taking the compass while holding the `beer_tankard` will remove the `beer_tankard` and add the compass to the player's inventory. The compass item will allow the player to move south from the Main Plaza into the Swamp area.

Eadburgh Inn

```
You are at the Inn,  
You love the welcoming atmosphere this place always has.
```

```
There is a bartender here.
```

```
- To the west is the exit to main plaza.  
-----
```

The Eadburgh Inn is both a resting place for those who have got nowhere to stay, but also the town's local bar. This is where the player will encounter the second NPC, the bartender. The player can use the `talk` command on the bartender to display the following dialogue:

```
Bartender: Evenin' Reverend! Woah, you're lookin' a wee bit under  
the weather tonight.  
Will you be havin' the usual? Red wine and the body of the Lord?  
Beer? Didn't even know you liked that!  
Anyway, this one's on the house! Sure hope it makes you feel better!  
Or at least look better...
```

```
Bartender placed a beer_tankard On the counter for you to take.
```

After talking with the bartender, he will leave a `beer_tankard` on the counter for the player to take. It is important to notice that since this item has two words in its name, they should be joined with an `'_'` (underscore) to make it possible for the `take` command to work properly. The player is free to take the `beer_tankard` without another item to trade for it. Doing so will display the following feedback:

```
Took the beer_tankard.
```

After talking the tankard, there is nothing else to possibly do in the Inn, leaving the player with no other option than to go back into the Main Plaza.

Swamp

```
Used the compass to move through the swamp.  
You are at the Inn.  
The moist air is thick here, you find it hard to breathe.  
  
- To the north is the path back to Eadburgh's main plaza.
```

- To the east you see an old cabin, almost consumed by the swamp's vegetation.
 - To the west is a Bald Cypress tree family.
-

The swamp is an area that functions as a connection between the Bald Cypress tree family and the old cabin. There are no items nor NPCs here, so the player may decide if they want to move to the tree family or the old cabin first, however, the recommended direction to move into first is the old cabin.

Old Cabin

You are inside the cabin.
The walls are covered with shelves,
topped with all sorts of weird stuff like plants and critters.

There is a witch here.

- To the west is the exit back to the swamp.
-

The old cabin is home to Old Jezabelle, the old witch that the beggar tells the player about. She is the NPC that will help the player get into the Church. The player is to talk to her, doing so will display the following dialogue:

Old Jezabelle: I'm a witch, but that you might have already figured, old cabin in the swamp and all heheh.
Cursed, huh? Heheheh, how careless of you! So, you want to know how to get rid of that curse, yes?
Heheheh...
Every now and then, some pesky traveler comes to Old Jezabelle, looking for something great she can do for them.
Some come seeking revenge on their most hated ones.
Some others come searching for unnatural love, a treacherous bond if you ask me.
What now? A priest, coming to such a godless being, to recover his holiness...
Heheheh, listen. Old Jezabelle will help you, but just because she enjoys the irony of the situation.
Old Jezabelle cannot lift the curse, but she can make a doll that will...

shall we say, camouflage your current state from the eyes of your God.

While holding the doll, you should be able to go inside the church and slay the thing that laid that curse upon you.

Yes, doing that should revert the curse permanently.

Funny coincidence heheheh, Old Jezabelle was just finishing a doll like the one she's telling you about.

The only thing missing is a piece of bald cypress tree bark. Get me some of that to complete the doll, and you are free to take it.

Old Jezabelle dropped the doll for you to take once you get the missing piece.

Talking with the witch will reveal an incomplete doll for the player to take. To take the doll however, the player needs to find a piece of cypress tree bark to complete the doll. If the player visited the Cypress Tree Family area before visiting the old cabin, they should have retrieved the `bark_piece`, making it possible to take the doll with them in an exchange for the bark.

(Once the Beer Tankard is Obtained)

After the player has found a `bark_piece` in the Cypress Tree Family area and is holding it in their inventory, they can now use the `take` command on the doll to trade it for the `bark_piece`, doing so will display the following dialogue and feedback:

Old Jezabelle: You found it! Hand me the doll so I can cover it with the bark to have it done.
You are free to take it. Good luck with your intent Old Jezabelle wishes to you, heheh...

The doll is complete and working now.
Took the doll.

Taking the doll while holding the `bark_piece` will remove the `bark_piece` and add the doll to the player's inventory. The doll item will allow the player to move north from the Church Plaza into the Church's Altar Room.

Cypress Tree Family

You are surrounded by enormous Bald Cypress trees.
One of the trees seems to have been struck by lightning,
breaking down its trunk into small pieces of bark.

There is a bark_piece here.

- To the east is the exit back to the swamp.

The Cypress Tree Family is the area where the player will find the bark needed to complete the witch's doll. Entering this location will reveal that the needed bark_piece is simply laying on the floor, free for the player to take it. Besides the bark_piece, there is nothing else to do in this area. Taking the bark_piece will display the following feedback message:

Took the bark_piece.

The player may visit this area either before or after visiting the old cabin. It will make no difference, however, the bark_piece is necessary for the player to take the doll.

Church Altar Room

You are in the church's altar room.
The effects of the doll allow you to stay here without burning to death.
You perceive that the violent noises are coming from the church's basement.

- To the south is the exit to church plaza.
- To the east are the stairs to descend to the basement.
- To the west is your study.

The Church Altar Room is basically a connecting area between the player character's study and the church's basement. The basement is inaccessible for the moment, leaving the study as the only possible room to visit. The basement will be available to go to once the player retrieves their cross and prayer_book items. If the player attempts to enter the basement without these items, the following message will be displayed:

"I can't just go kill a vampire empty-handed. I should get both my cross and prayer book from home."
You cannot go that way.

The `cross` and `prayer_book` items can be found in the player character's house, west to Church Plaza. If the player retrieves only one of the two items mentioned, the game will display one of the following messages respectively:

(if player is only holding cross)

The cross alone will do no good, I need my prayer book too.

(if player is only holding prayer book)

The prayer book alone will do no good, I need my cross too

If the player enters the Church Altar Room while holding both the `cross` and the `prayer book`, the game will display the following message variant:

You are in the church's altar room.
The effects of the doll allow you to stay here without burning to death.
The violent noises coming from the basement have gone silent...

- To the south is the exit to church plaza.
- To the east are the stairs to descend to the basement.
- To the west is your study.

To continue advancing through the game, the player is expected to go west into the study.

Study

You are in your study.
Everything is still the way you left it before being attacked.
Lucky that thing did not go into this room.

```
- To the east is the exit to the altar room.  
-----
```

The study is the area where the player will find the key needed to be able to visit the player character's house. Entering this location will reveal that the needed `house_key` is simply laying in the room, free for the player to take it. Besides the `house_key`, there is nothing else to do in this area. Taking the `house_key` will display the following feedback message:

```
Took the house_key.
```

Your House

```
Used your house key to unlock the door.  
You are home.  
You wish you could just stay and get some rest,  
but you have to keep going.
```

```
- To the east is the exit to church plaza.  
-----
```

The study is the area where the player will find the items needed to finally be able to go into the church's basement and fight the vampire. Both the `cross` and the `prayer_book` items will be laying in the player character's house. The player is to take both items with them, otherwise, they will still not be able to go into the basement. Other than retrieving both items, there is nothing else to do in this location.

Church Basement

```
You are in the church basement.  
It is freezing in here. You can feel a dense shiver traveling  
through your body.
```

```
There is a vampire here.  
-----
```

This is it, the final room. This is where the vampire who afflicted you with the curse has been hiding. Armed with your cross and your prayer book, you are ready to fight the vampire. To fight him, simply input the `talk` command to "talk with the vampire". Doing so will display the following message:

Vampire: Ahh, you found your way into my hideout.
I see you are holding a doll just like mine.
To be honest, I thought I killed you during our first encounter.
No worries, since the opportunity presented itself to me, this time
I shall kill you right.

* As you take out your cross and your holy book, the vampire
flinches against the wall. *
* You pronounce some lines from the book, making the vampire twitch
in pain. *
* You raise the cross and point it directly in the creature's
direction. *
* The vampire's life force slowly drains until it is completely
gone. *
* It finally recedes into colorless dust, falling onto the cold,
stone floor of Eadburgh's Church *
* You got rid of the creature that has been terrorizing Eadburgh.
*
* You can feel the curse leave your body, as if something got off
your shoulders. *

GAME OVER. THANKS FOR PLAYING.
Please enter the halt command.

This is where the game finishes, there is nothing else to do other than to input the `halt` command to stop the execution. Congratulations, you have beaten the game.

World Map

...

Bibliography

Lu, J. (N. D.) Prolog A Tutorial Introduction. Computer Science Department. Bucknell University. Accessed on: October 2020. Available at: http://academicos.azc.uam.mx/cbr/Cursos/UEA_12p_Log/PrologIntro_eng_good.pdf

Burnett, I. (2015) The Text Adventure: Relic of Gaming History, or Timeless Medium? The Artifice. Accessed on: October 2020. Available at: <https://the-artifice.com/text-adventure-gaming-history/>

Ireson-Paine, J. (2020) Why Use Prolog? Joselyn Ireson-Paine Consultancy. Accessed on: October 2020. Available at: http://www.j-paine.org/why_prolog.html

Treasure-Jones, T. (1996) Introduction to Prolog. Accessed on: October 2020. Available at: http://www.doc.gold.ac.uk/~mas02gw/prolog_tutorial/prologpages/

N. A. (2020) Predicate consult/1. Prolog Documentation. Accessed on: October 2020. Available at: <https://www.swi-prolog.org/pldoc/man?predicate=consult/1>

N. A. (2020) Predicate dynamic/1. Prolog Documentation. Accessed on: October 2020. Available at: <https://www.swi-prolog.org/pldoc/man?predicate=dynamic/1>

N. A. (N. D.) Zork I. Classic Reload. Accessed on: October 2020. Available at: <https://classicreload.com/zork-i.html>

N. A. (N. D.) Assert, Asserta, Asseertz. Accessed on: October 2020. Available at: <http://www.cse.unsw.edu.au/~billw/dictionaries/prolog/assert.html>

N. A. (N. D.) Retract, Retractall. Accessed on: October 2020. Available at: <http://www.cse.unsw.edu.au/~billw/dictionaries/prolog/retract.html>