Activity 3: Build Fire Alternate Flows

There are multiple ways that you can lay out Alternate Flows. Below are a few.

**Build Fire**

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| **Description** | The purpose of this use case is to allow the actor to build a fire for a bonfire or a campfire. |
| **Actors** | A human being over the age of 16 |
| **Pre-Conditions** | * The actor has sufficient tinder or kindling to be able to get the firewood to burn. * The actor has sufficient firewood to burn as long as desired. * The actor has matches, a lighter, or other ignition material. * The actor has an accelerant. |
| **Post-Conditions** | * The actor has successfully started a fire that will burn as long as desired when monitored properly. |
| **Use Cases Utilized** | N/A |

**Primary Flow**

1. The actor decides to build a fire for a bonfire or campfire.
2. The actor organizes firewood such that air can flow around the firewood.
3. The actor places tinder or kindling in a position where it can be ignited safely and will spread to the firewood.
4. The actor lights the tinder or kindling.
5. The actor monitors the fire.
6. The firewood ignites sufficiently to burn for the desired amount of time. [**A1]**, **[A2**]

**Use case ends here**

**Alternate Flows**

**A1 – Tinder Burns Without Igniting the Firewood**

1. The tinder burns without igniting the firewood.
2. The actor adds more tinder.

**Use case resumes at Step 4**

**A2 – Actor Adds an Accelerant**

1. The firewood has failed to burn after repeated attempts.
2. The actor adds an accelerant. **[A3]**

**Use case resumes at Step 3**

**A3 – Actor Has Used an Accelerant and Intends to Cook Over the Fire**

1. The actor has used an accelerant and intends to cook over the fire.
2. The actor allows the fire to burn off the accelerant before placing food over the fire.

**Use case ends**

**Business Rules**

1. Firewood can be organized in a variety of ways to support a long-burning fire, e.g., a teepee or cone shape.
2. Tinder is a small amount of material that will ignite rapidly, e.g., paper, twigs, dried leaves, Spanish moss, pine needles, pinecones, or other fire starters.
3. An accelerant is a petroleum product such as gasoline or other fuel.
4. Use of an accelerant can impact the taste of any food cooked on the fire. It is advisable to allow the accelerant to burn off before beginning to cook.
5. The fire should be monitored for at least 15 minutes to determine if the firewood will burn.
6. Additional firewood may need to be added to keep the fire burning for the desired duration.

