

Testing the Edges Activity – Test Problem Scenarios Handout

Problem A

Scenario: Write a function called `canCastSpell`, which determines whether a character in an adventure game is capable of casting a magic spell.

This function takes in three parameters:

- A String indicating the class of the character trying to cast the spell; this string must be one of “White mage,” “Red mage,” “Black mage,” or “Fighter.” (Note: a “mage” is a magician or wizard; rhymes with cage.)
- A String indicating the kind of spell to be cast; this string must be either “Cure” or “Fire.”
- An integer that indicates the spell level (from 1 to 5).



The function should return `true` if the given character can cast the given spell, and `false` otherwise. Each class has certain restrictions on the spells it can cast:

- White mages can cast Cure spells, of any level.
- Black mages can cast Fire spells, of any level.
- Red mages can cast both Cure and Fire spells, but only at levels 1 through 3.
- Fighters cannot cast any spells.

Problem B

Scenario: Write a function called `canUseWeapon`, which determines whether a character in an adventure game can wield a given weapon. This function takes in three parameters:

- A String indicating the class of the character who will wield the weapon; this string must be one of “White mage,” “Red mage,” “Black mage,” or “Fighter.”
- A String indicating the weapon to be wielded; this string must be one of “Staff” or “Sword.”
- An integer that indicates the weapon’s weight (from 1 to 20).

The function should return `true` if the given character can use the given weapon, and `false` otherwise. Each class has certain weapon restrictions:

- White mages can only use staves (of any weight).
- Black mages can only use swords that weigh 10 or less units.
- Red mages can use any weapon that weighs 15 or less.
- Fighters can use any weapon, regardless of type or weight.