Challenge-6

Daniel Tan

2023-09-18

Questions

Question-1: Countdown Blastoff (While Loop) Create a program that simulates a rocket launch countdown using a while loop. Start from 10 and countdown to "Blastoff!" with a one-second delay between each countdown number. Print a message when the rocket launches.

Hint: You may want to use `cat` command to print the countdown and `Sys.sleep` for incorporating the delay

Output preview: Here is how the countdown could look like

Solutions:

```
# Enter code here
countdown <- 10

while (countdown >= 0) {
  if (countdown == 0) {
    cat("Blastoff!\n")
  } else {
    cat("Countdown:", countdown, "\n")
  }

  Sys.sleep(1)  # Delay of 1 second
  countdown <- countdown - 1
}
```

```
## Countdown: 10
## Countdown: 9
## Countdown: 8
## Countdown: 7
## Countdown: 6
## Countdown: 5
## Countdown: 4
## Countdown: 3
## Countdown: 2
## Countdown: 1
## Blastoff!
```

```
cat("Rocket has launched!\n")
```

```
## Rocket has launched!
```

Question-2: Word Reverser (for Loop) Develop a program that takes a user-entered word and uses a while loop to print the word's characters in reverse order. For example, if the user enters "hello," the program should print "olleh."

Hint: You may want to use `substr` command to access each character of the input word, and `paste` command to join the reversed letters one at a time

Solutions:

```
# Enter code here
reverse_word <- function(word) {
  reversed <- ""
  i <- nchar(word)
  while (i > 0) {
    reversed <- paste0(reversed, substr(word, i, i))
    i <- i - 1
  }
  return(reversed)
}

reverse_word("tacocat1")
```

```
## [1] "1tacocat"
```