

Challenge-6

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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

*removed images here for printing since images cannot be found on my laptop

Solutions:

```
# Enter code here
count <- 10
while (count >= 1) {
  cat(count, "...", "\n")
  count <- count - 1
  Sys.sleep(1)
}
```

```
## 10 ...
## 9 ...
## 8 ...
## 7 ...
## 6 ...
## 5 ...
## 4 ...
## 3 ...
## 2 ...
## 1 ...
```

```
print("and...blastoff!")
```

```
## [1] "and...blastoff!"
```

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
reversi <- function(word){
  index <- nchar(word)
  reversed_word <- ""
  while (index > 0){
    reversed_word <- paste(reversed_word, substr(word, index, index), sep = "")
    index <- index - 1
  }
  print(reversed_word)
}
reversi("heloooOo")
```

```
## [1] "oOoooleh"
```