

# 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

**Solutions:**

```
# Enter code here
countdown <- 10

while (countdown > 0) {
  cat(countdown, "...\\n")
  Sys.sleep(1)
  countdown <- countdown - 1
}
```

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

```
cat("Blastoff!\\n")
```

```
## 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
word <- readline("Enter a word: ")

## Enter a word:

index <- nchar(word)
reversed_word <- ""

while (index > 0) {
  char <- substr(word, index, index)
  reversed_word <- paste0(reversed_word, char)
  index <- index - 1
}

cat("Reversed word:", reversed_word, "\n")

## Reversed word:
```