

# Palindrome Checking Methods in Shell Script

---

## 1. Using `rev` (Simple and Recommended)

```
read -p "Enter the word: " word
if [ "$word" = "$(echo "$word" | rev)" ]; then
    echo "Palindrome"
else
    echo "Not Palindrome"
fi
```

## 2. Using Loop with `cut` Command

```
echo "Enter the word: "
read word

len=$(expr length "$word")
i=1
j=$len
flag=0

while [ $i -lt $j ]
do
    a=$(echo "$word" | cut -c $i)
    b=$(echo "$word" | cut -c $j)
    if [ "$a" != "$b" ]; then
        flag=1
        break
    fi
    i=$((i + 1))
    j=$((j - 1))
done

if [ $flag -eq 0 ]; then
    echo "The word is a Palindrome"
else
    echo "The word is NOT a Palindrome"
fi
```

### 3. Using Bash Substring Expansion (No External Commands)

```
read -p "Enter the word: " word
len=${#word}
is_pal=1

for ((i=0; i<len/2; i++)); do
    if [ "${word:$i:1}" != "${word: -${(i+1)}:1}" ]; then
        is_pal=0
        break
    fi
done

if [ $is_pal -eq 1 ]; then
    echo "Palindrome"
else
    echo "Not Palindrome"
fi
```

### 4. Using AWK

```
read -p "Enter the word: " word
echo "$word" | awk '{rev=""; for(i=length;i>0;i--) rev=rev substr($0,i,1); if($0==rev) print "Palindrome";
else print "Not Palindrome"}'
```

Summary Table:

Method	Uses External Command	Fast	Easy to Read
<code>rev</code>	Yes	✓	✓
Loop with <code>cut</code>	Yes	✗	✗ (verbose)
Bash substring	No	✓	✓
AWK	Yes	✓	Moderate