```bash
#!/bin/bash

# Function to find the greatest of three numbers
greatest_of_three() {
    if [ $# -ne 3 ]; then
        echo "Please provide exactly three numbers."
        return
    fi

    a=$1
    b=$2
    c=$3

    if [ $a -ge $b ] && [ $a -ge $c ]; then
        echo "The greatest number is $a."
    elif [ $b -ge $a ] && [ $b -ge $c ]; then
        echo "The greatest number is $b."
    else
        echo "The greatest number is $c."
    fi
}

# Function to check if a number is even or odd
even_odd() {
    if [ $# -ne 1 ]; then
        echo "Please provide a single number."
        return
    fi

    num=$1
    if [ $((num % 2)) -eq 0 ]; then
        echo "$num is even."
    else
        echo "$num is odd."
    fi
}

# Function to calculate the average of n numbers
average_of_numbers() {
    if [ $# -lt 1 ]; then
        echo "Please provide at least one number."
        return
    fi

    sum=0
    count=0
    for num in "$@"; do
        sum=$((sum + num))
        count=$((count + 1))
    done

    average=$((sum / count))
    echo "The average is $average."
}

# Function to check if a number is prime
is_prime() {
    if [ $# -ne 1 ]; then
        echo "Please provide a single number."
        return
    fi

    num=$1
```

```bash
    if [ $num -lt 2 ]; then
        echo "$num is not a prime number."
        return
    fi

    for ((i=2; i*i<=num; i++)); do
        if [ $((num % i)) -eq 0 ]; then
            echo "$num is not a prime number."
            return
        fi
    done

    echo "$num is a prime number."
}

# Function to check if the input is a number or a string
check_number_or_string() {
    if [ $# -ne 1 ]; then
        echo "Please provide a single input."
        return
    fi

    if [[ $1 =~ ^-?[0-9]+$ ]]; then
        echo "$1 is a number."
    else
        echo "$1 is a string."
    fi
}

# Function to compute number of characters and words in each line of a given
file
char_word_count() {
    if [ $# -ne 1 ]; then
        echo "Please provide a file name."
        return
    fi

    file=$1

    while IFS= read -r line; do
        char_count=$(echo -n "$line" | wc -m)
        word_count=$(echo "$line" | wc -w)
        echo "Line: $line"
        echo "Characters: $char_count"
        echo "Words: $word_count"
        echo
    done < "$file"
}

# Function to print the Fibonacci series up to n terms
fibonacci_series() {
    if [ $# -ne 1 ]; then
        echo "Please provide a single number."
        return
    fi

    n=$1
    a=0
    b=1

    echo "Fibonacci series up to $n terms:"
    for ((i=0; i<n; i++)); do
        echo -n "$a "
        fn=$((a + b))
```

```bash
        a=$b
        b=$fn
    done
    echo
}

# Function to calculate the factorial of a given number
factorial() {
    if [ $# -ne 1 ]; then
        echo "Please provide a single number."
        return
    fi

    num=$1
    fact=1

    for ((i=2; i<=num; i++)); do
        fact=$((fact * i))
    done

    echo "Factorial of $num is $fact."
}

# Function to calculate the sum of digits of a given number
sum_of_digits() {
    if [ $# -ne 1 ]; then
        echo "Please provide a single number."
        return
    fi

    num=$1
    sum=0

    while [ $num -gt 0 ]; do
        digit=$((num % 10))
        sum=$((sum + digit))
        num=$((num / 10))
    done

    echo "Sum of digits is $sum."
}

# Function to check if a given string is a palindrome
is_palindrome() {
    if [ $# -ne 1 ]; then
        echo "Please provide a single string."
        return
    fi

    str=$1
    reversed=$(echo "$str" | rev)

    if [ "$str" == "$reversed" ]; then
        echo "$str is a palindrome."
    else
        echo "$str is not a palindrome."
    fi
}

# Main menu driven program
while true; do
    echo -e "\n\n"
    echo "Menu:"
    echo "1. Greatest of three numbers"
```
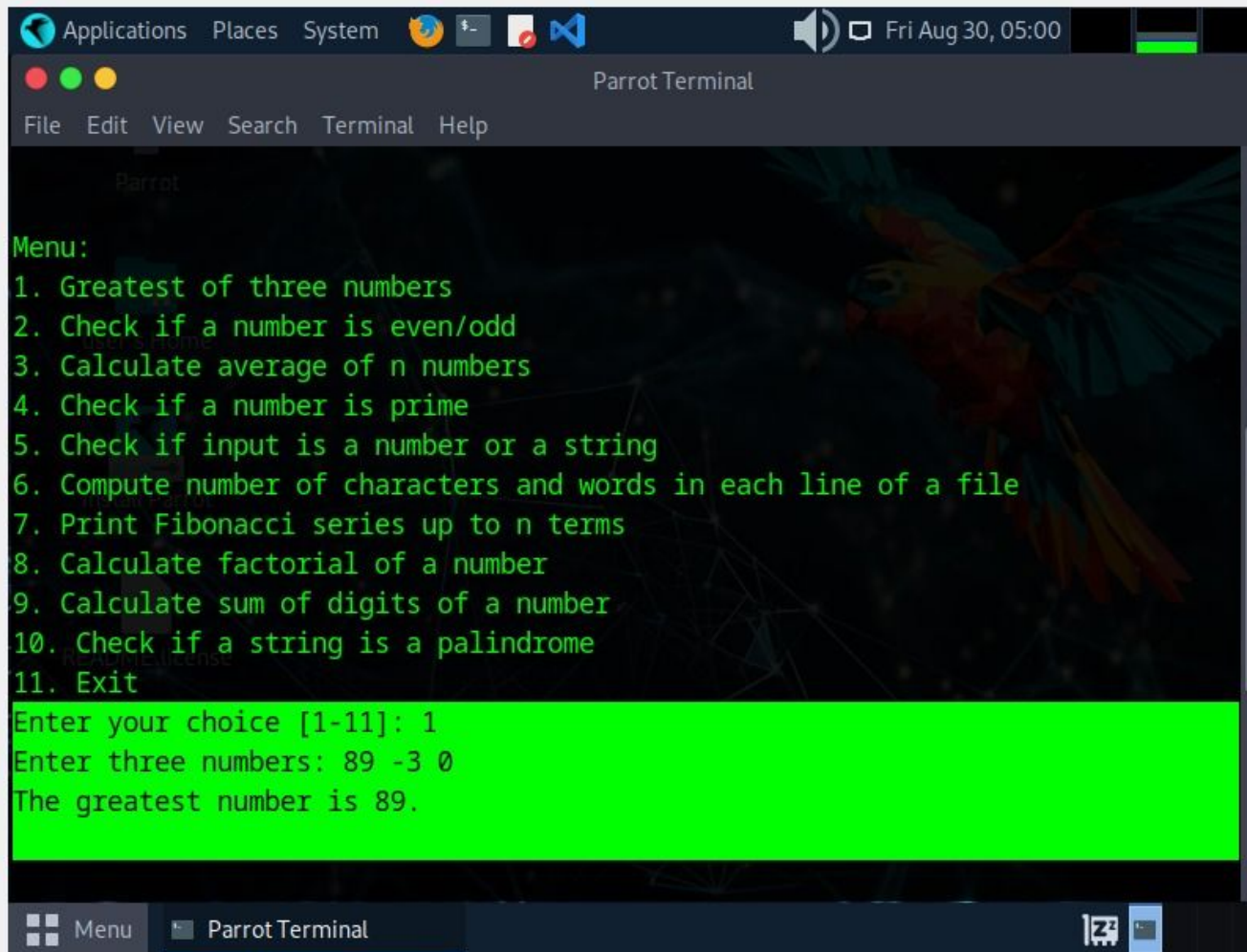
```bash
echo "2. Check if a number is even/odd"
echo "3. Calculate average of n numbers"
echo "4. Check if a number is prime"
echo "5. Check if input is a number or a string"
echo "6. Compute number of characters and words in each line of a file"
echo "7. Print Fibonacci series up to n terms"
echo "8. Calculate factorial of a number"
echo "9. Calculate sum of digits of a number"
echo "10. Check if a string is a palindrome"
echo "11. Exit"
echo -n "Enter your choice [1-11]: "
read choice

case $choice in
    1)
        echo -n "Enter three numbers: "
        read a b c
        greatest_of_three $a $b $c
        ;;
    2)
        echo -n "Enter a number: "
        read num
        even_odd $num
        ;;
    3)
        echo -n "Enter numbers separated by space: "
        read -a numbers
        average_of_numbers "${numbers[@]}"
        ;;
    4)
        echo -n "Enter a number: "
        read num
        is_prime $num
        ;;
    5)
        echo -n "Enter input: "
        read input
        check_number_or_string "$input"
        ;;
    6)
        echo -n "Enter file name: "
        read file
        char_word_count "$file"
        ;;
    7)
        echo -n "Enter number of terms: "
        read n
        fibonacci_series $n
        ;;
    8)
        echo -n "Enter a number: "
        read num
        factorial $num
        ;;
    9)
        echo -n "Enter a number: "
        read num
        sum_of_digits $num
        ;;
    10)
        echo -n "Enter a string: "
        read str
        is_palindrome "$str"
        ;;
```
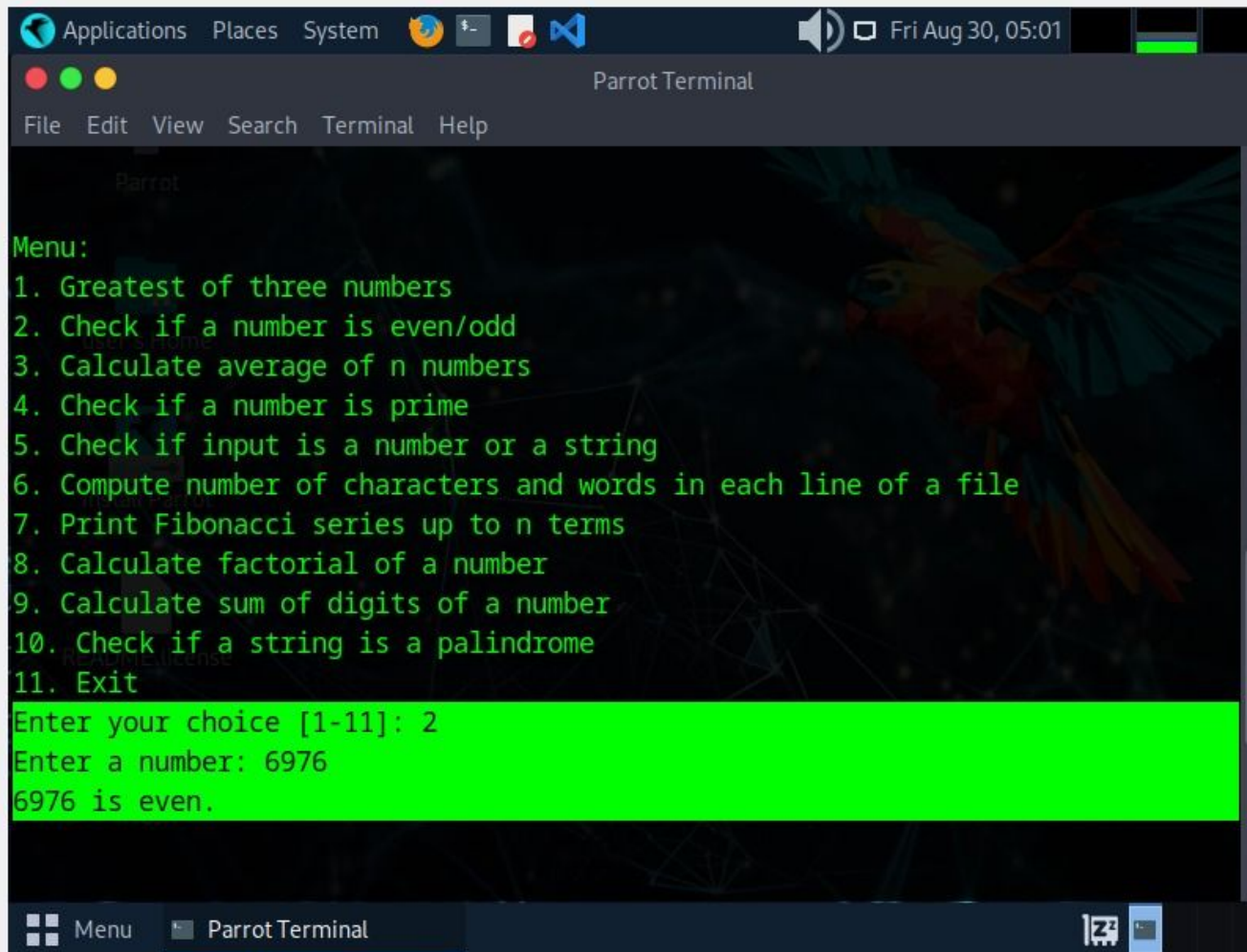
```bash
        11)
            echo "Exiting the program."
            exit 0
            ;;
        *)
            echo "Invalid choice. Please select a number between 1 and 11."
            ;;
    esac
done
```
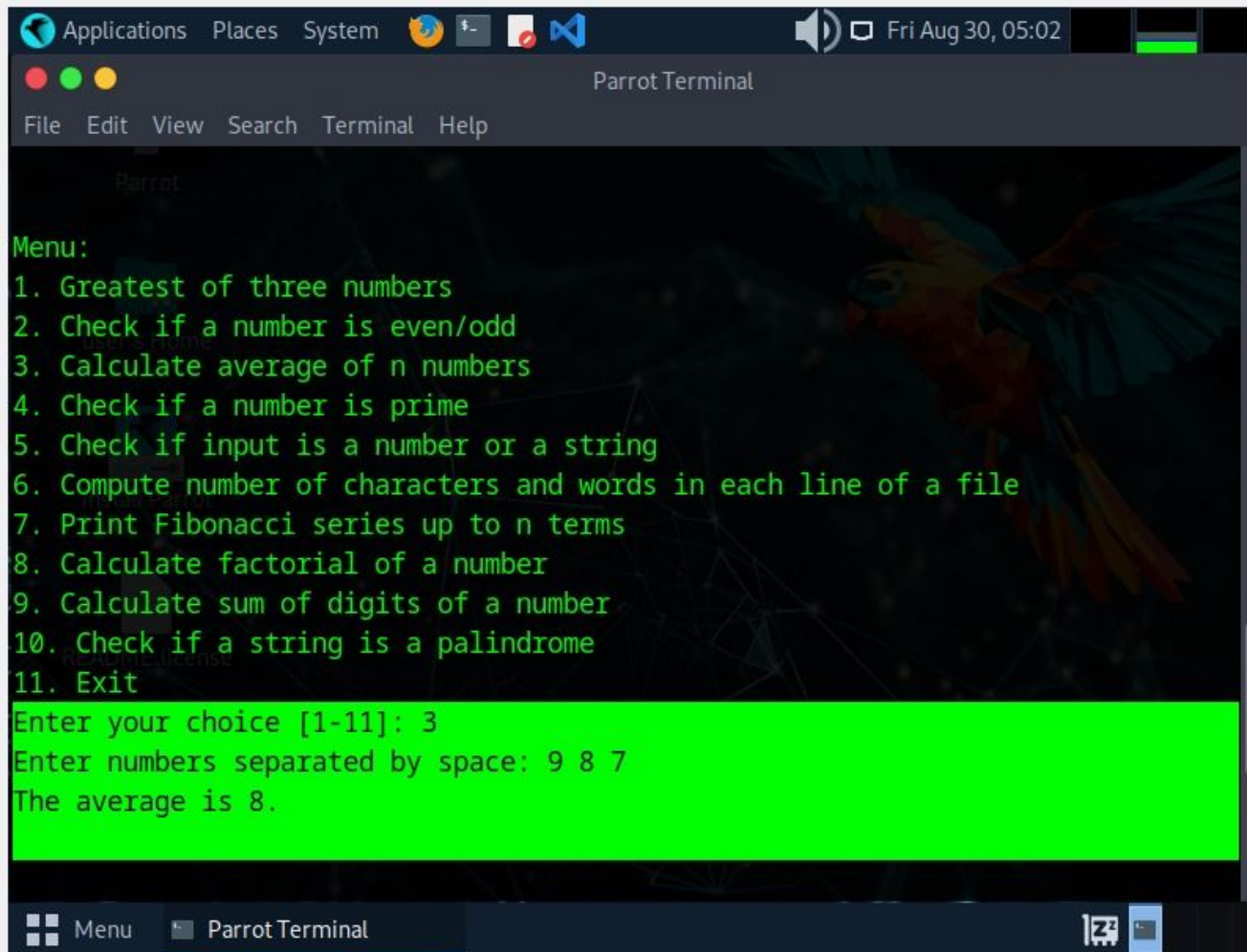
Menu:
1. Greatest of three numbers
2. Check if a number is even/odd
3. Calculate average of n numbers
4. Check if a number is prime
5. Check if input is a number or a string
6. Compute number of characters and words in each line of a file
7. Print Fibonacci series up to n terms
8. Calculate factorial of a number
9. Calculate sum of digits of a number
10. Check if a string is a palindrome
11. Exit
Enter your choice [1-11]: 1
Enter three numbers: 89 -3 0
The greatest number is 89.

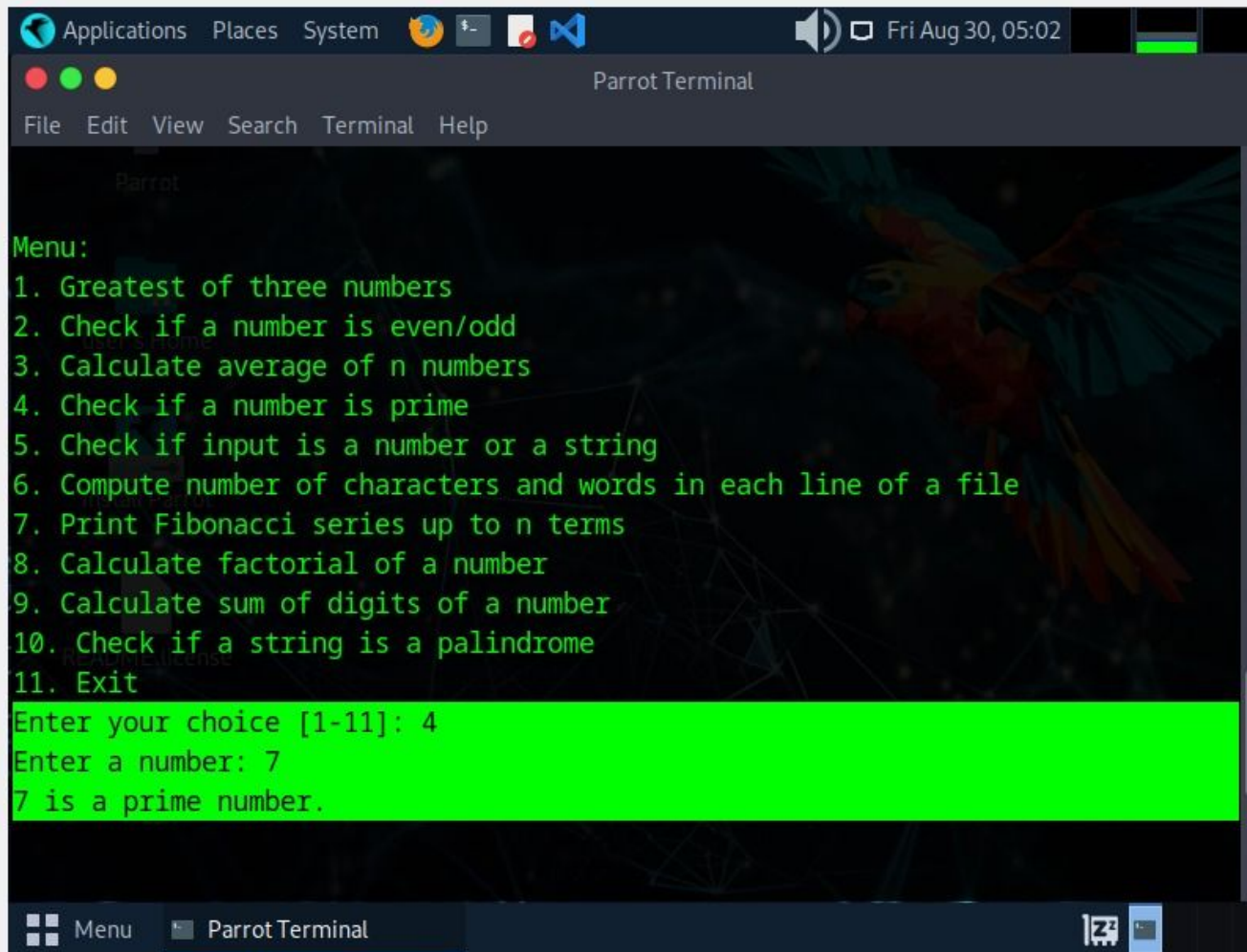Parrot Terminal

File   Edit   View   Search   Terminal   Help

```
Menu:
1. Greatest of three numbers
2. Check if a number is even/odd
3. Calculate average of n numbers
4. Check if a number is prime
5. Check if input is a number or a string
6. Compute number of characters and words in each line of a file
7. Print Fibonacci series up to n terms
8. Calculate factorial of a number
9. Calculate sum of digits of a number
10. Check if a string is a palindrome
11. Exit
Enter your choice [1-11]: 2
Enter a number: 6976
6976 is even.
```
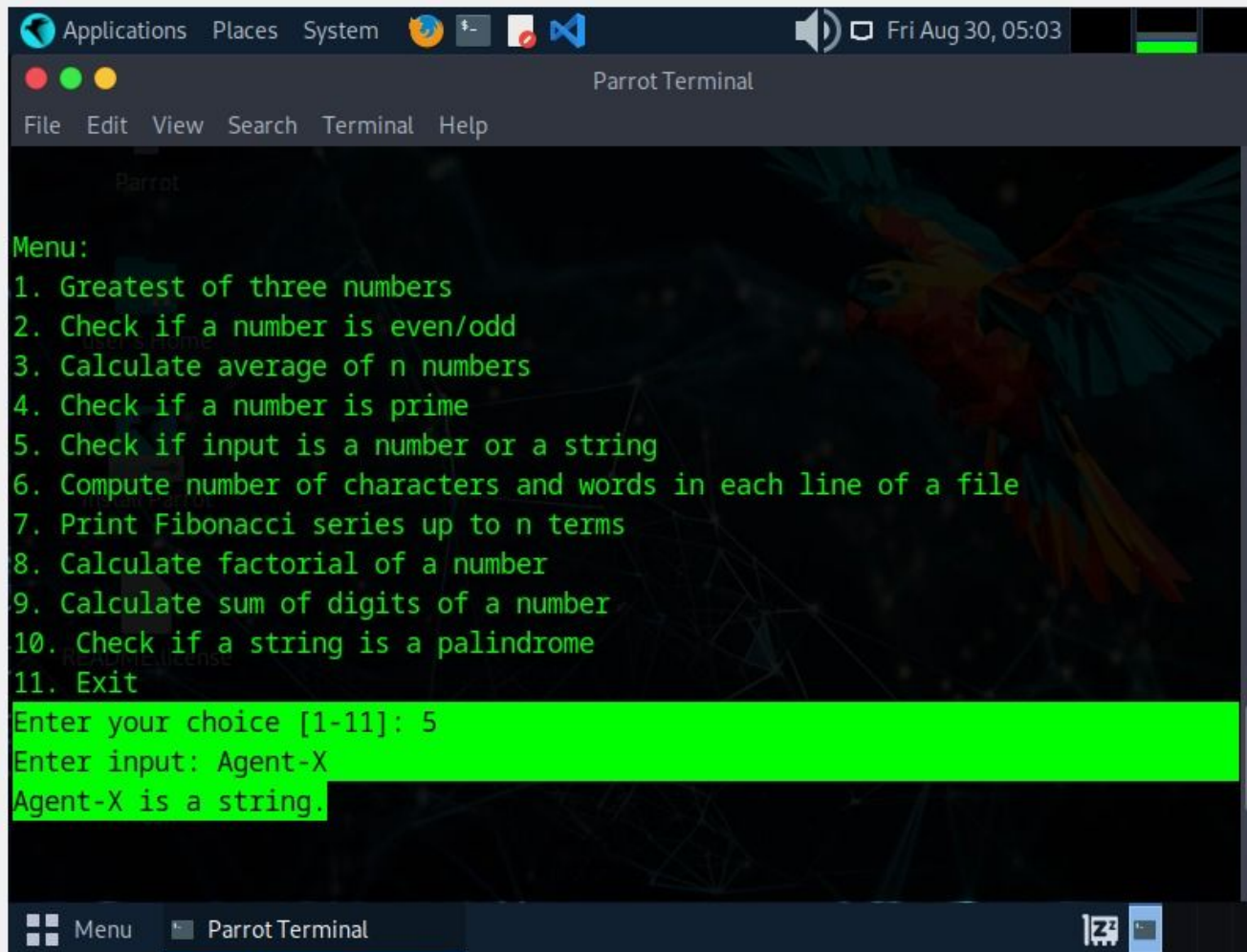
Menu:
1. Greatest of three numbers
2. Check if a number is even/odd
3. Calculate average of n numbers
4. Check if a number is prime
5. Check if input is a number or a string
6. Compute number of characters and words in each line of a file
7. Print Fibonacci series up to n terms
8. Calculate factorial of a number
9. Calculate sum of digits of a number
10. Check if a string is a palindrome
11. Exit
Enter your choice [1-11]: 3
Enter numbers separated by space: 9 8 7
The average is 8.

Parrot Terminal

File   Edit   View   Search   Terminal   Help
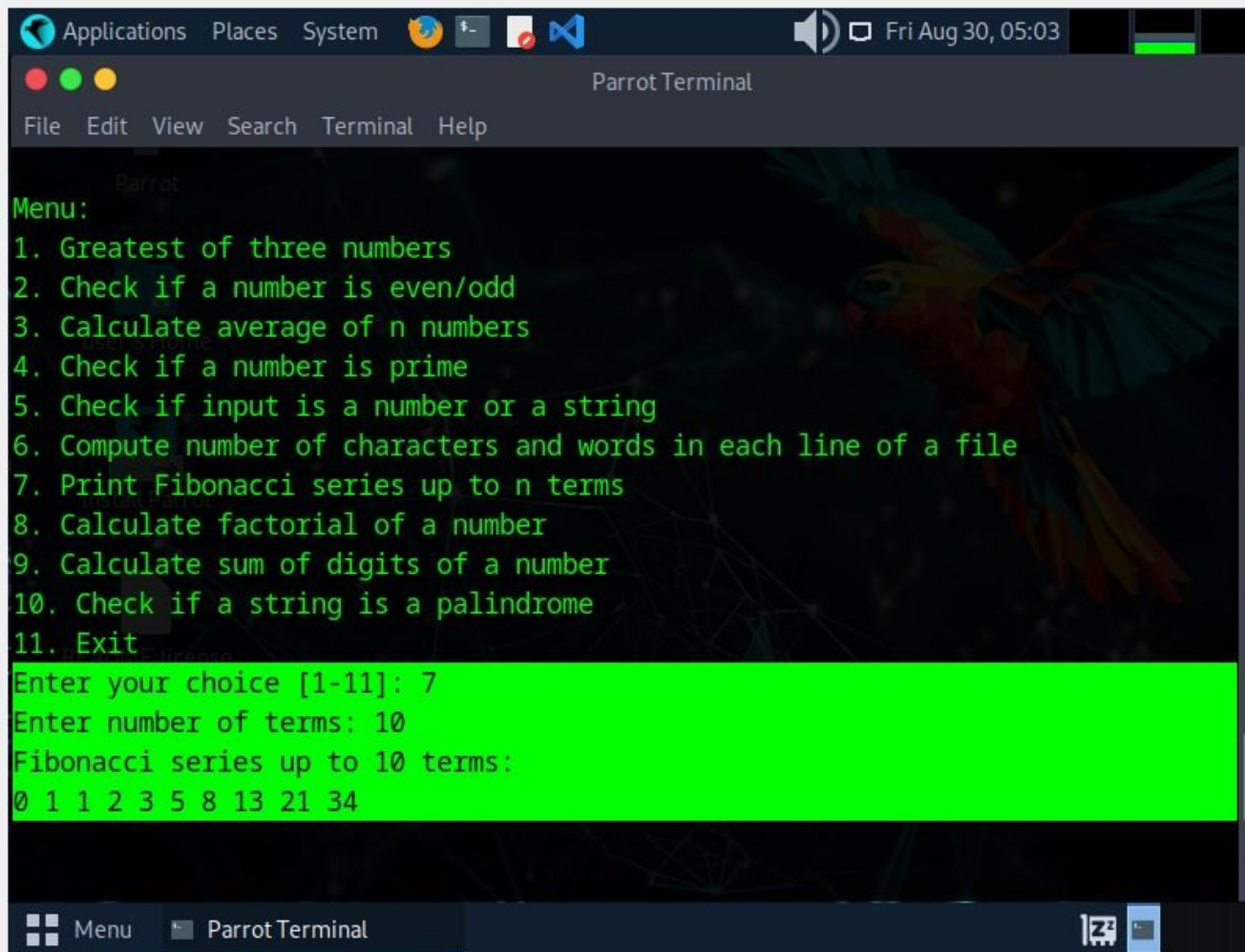
Parrot

```
Menu:
1. Greatest of three numbers
2. Check if a number is even/odd
3. Calculate average of n numbers
4. Check if a number is prime
5. Check if input is a number or a string
6. Compute number of characters and words in each line of a file
7. Print Fibonacci series up to n terms
8. Calculate factorial of a number
9. Calculate sum of digits of a number
10. Check if a string is a palindrome
11. Exit
Enter your choice [1-11]: 4
Enter a number: 7
7 is a prime number.
```

Menu   Parrot Terminal

Menu:
1. Greatest of three numbers
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4. Check if a number is prime
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6. Compute number of characters and words in each line of a file
7. Print Fibonacci series up to n terms
8. Calculate factorial of a number
9. Calculate sum of digits of a number
10. Check if a string is a palindrome
11. Exit
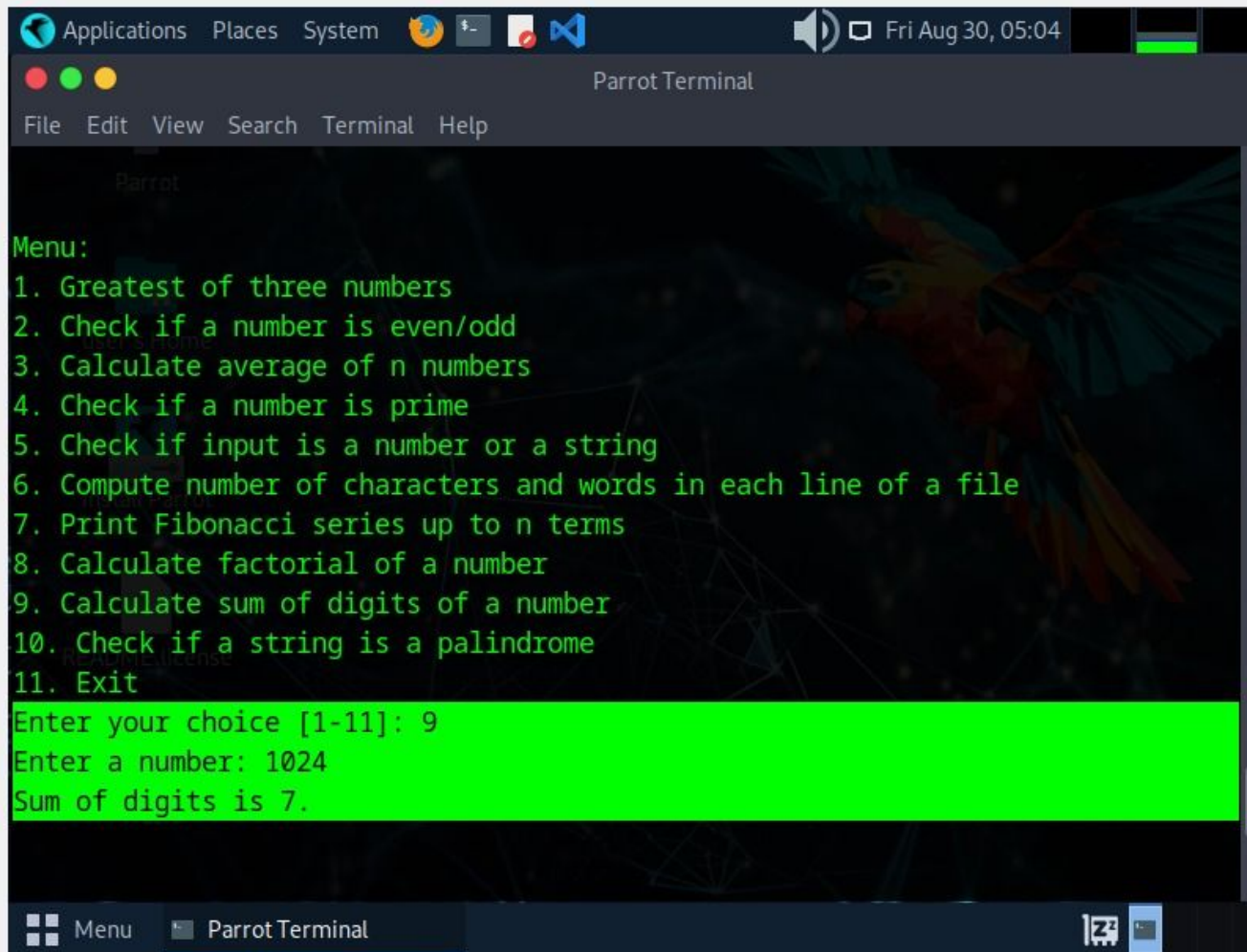Enter your choice [1-11]: 5
Enter input: Agent-X
Agent-X is a string.

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Parrot Terminal

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Menu:
1. Greatest of three numbers
2. Check if a number is even/odd
3. Calculate average of n numbers
4. Check if a number is prime
5. Check if input is a number or a string
6. Compute number of characters and words in each line of a file
7. Print Fibonacci series up to n terms
8. Calculate factorial of a number
9. Calculate sum of digits of a number
10. Check if a string is a palindrome
11. Exit
Enter your choice [1-11]: 7
Enter number of terms: 10
Fibonacci series up to 10 terms:
0 1 1 2 3 5 8 13 21 34

Menu   Parrot Terminal

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Parrot Terminal

File   Edit   View   Search   Terminal   Help

Menu:
1. Greatest of three numbers
2. Check if a number is even/odd
3. Calculate average of n numbers
4. Check if a number is prime
5. Check if input is a number or a string
6. Compute number of characters and words in each line of a file
7. Print Fibonacci series up to n terms
8. Calculate factorial of a number
9. Calculate sum of digits of a number
10. Check if a string is a palindrome
11. Exit
Enter your choice [1-11]: 9
Enter a number: 1024
Sum of digits is 7.

Menu   Parrot Terminal

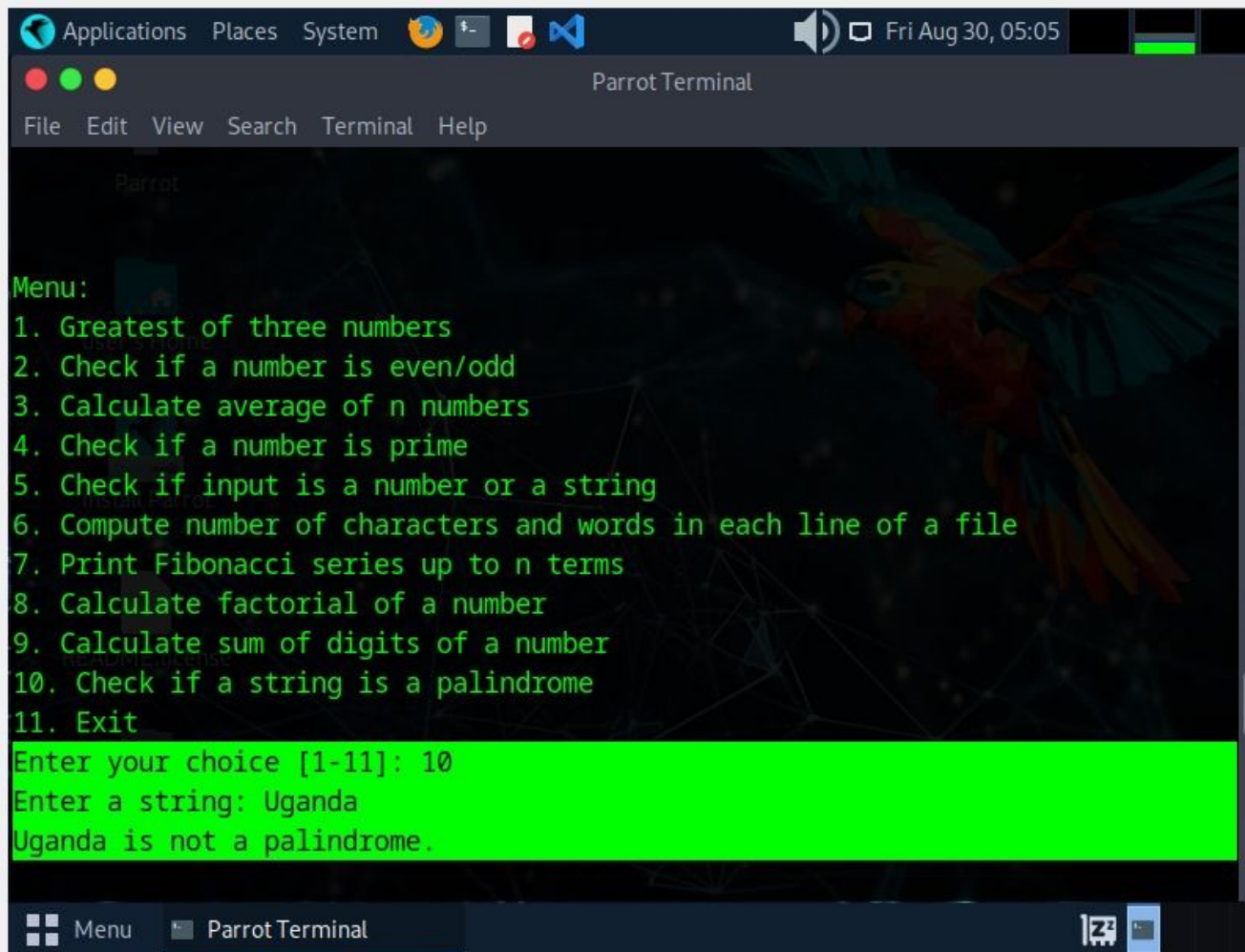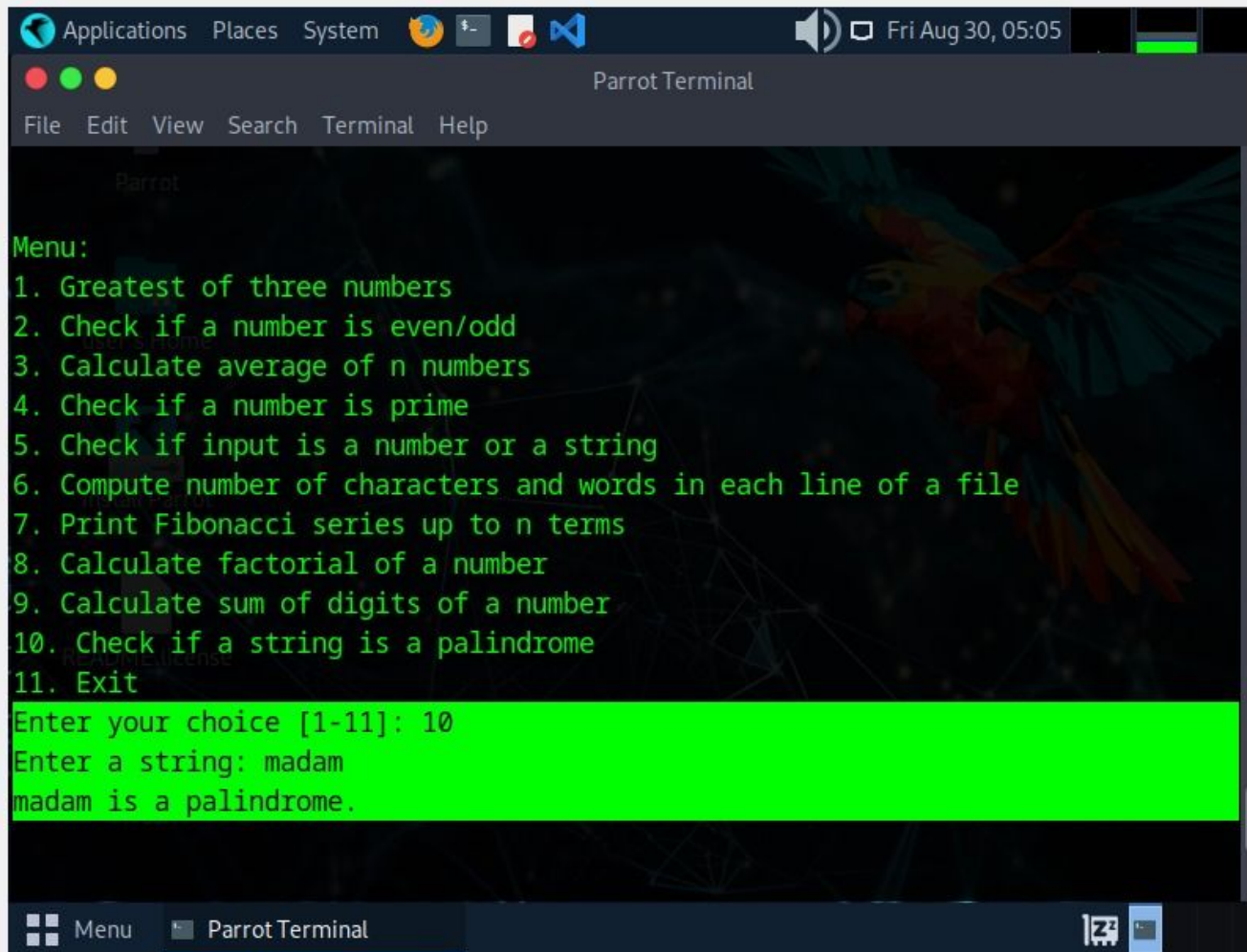Applications   Places   System   Fri Aug 30, 05:05

Parrot Terminal

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Parrot

Menu:
1. Greatest of three numbers
2. Check if a number is even/odd
3. Calculate average of n numbers
4. Check if a number is prime
5. Check if input is a number or a string
6. Compute number of characters and words in each line of a file
7. Print Fibonacci series up to n terms
8. Calculate factorial of a number
9. Calculate sum of digits of a number
10. Check if a string is a palindrome
11. Exit
Enter your choice [1-11]: 10
Enter a string: Uganda
Uganda is not a palindrome.

Menu   Parrot Terminal

Menu:
1. Greatest of three numbers
2. Check if a number is even/odd
3. Calculate average of n numbers
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5. Check if input is a number or a string
6. Compute number of characters and words in each line of a file
7. Print Fibonacci series up to n terms
8. Calculate factorial of a number
9. Calculate sum of digits of a number
10. Check if a string is a palindrome
11. Exit
Enter your choice [1-11]: 10
Enter a string: madam
madam is a palindrome.