

VIRTUNEXA PYTHON DEVELOPMENT TASK-1

PROGRAM:

```
import time
import threading

# Countdown Timer Function
def countdown_timer():
    user_input = input("Enter countdown time (e.g., 10s or 1m): ").strip().lower()
    try:
        if user_input.endswith("s"):
            total_seconds = int(user_input[:-1])
        elif user_input.endswith("m"):
            total_seconds = int(user_input[:-1]) * 60
        else:
            print("Invalid format! Use 's' for seconds or 'm' for minutes.")
            return

        print(f"\n ⌚ Countdown started for {total_seconds} seconds...\n")

        def run_timer():
            for remaining in range(total_seconds, 0, -1):
                mins, secs = divmod(remaining, 60)
                print(f"Time left: {mins:02d}:{secs:02d}", end='\r')
                time.sleep(1)

            print(f"\n ⌚ Time's up!")

        threading.Thread(target=run_timer).start()
    except ValueError:
        print("Please enter a valid number with 's' or 'm'.")
```

```
# Calculator Function
```

```
def calculator():
```

```
    expression = input("Enter an arithmetic expression (e.g., 2 + 3 * 4): ")
```

```
    try:
```

```
        result = eval(expression, {"__builtins__": None}, {})
```

```
        print(f"Result: {result}")
```

```
    except ZeroDivisionError:
```

```
        print("Error: Cannot divide by zero.")
```

```
    except Exception:
```

```
        print("Error: Invalid expression!")
```

```
# Main Menu
```

```
def main():
```

```
    while True:
```

```
        print("\n--- Countdown Timer & Calculator ---")
```

```
        print("1. Start Countdown Timer")
```

```
        print("2. Use Calculator")
```

```
        print("3. Exit")
```

```
        choice = input("Choose an option (1-3): ").strip()
```

```
        if choice == "1":
```

```
            countdown_timer()
```

```
        elif choice == "2":
```

```
            calculator()
```

```
        elif choice == "3":
```

```
            print("Goodbye!")
```

```
            break
```

```
        else:
```

```
print("Invalid choice. Please enter 1, 2, or 3.")
```

Entry Point

```
if __name__ == "__main__":
```

```
    main()
```

OUTPUT:

```
--- Countdown Timer & Calculator ---
1. Start Countdown Timer
2. Use Calculator
3. Exit
Choose an option (1-3): 2
Enter an arithmetic expression (e.g., 2 + 3 * 4): 3/0
Error: Cannot divide by zero.

--- Countdown Timer & Calculator ---
1. Start Countdown Timer
2. Use Calculator
3. Exit
Choose an option (1-3): 2
Enter an arithmetic expression (e.g., 2 + 3 * 4): 2+*3
Error: Invalid expression!

--- Countdown Timer & Calculator ---
1. Start Countdown Timer
2. Use Calculator
3. Exit
Choose an option (1-3): 2
Enter an arithmetic expression (e.g., 2 + 3 * 4): 2+3*4
Result: 14

--- Countdown Timer & Calculator ---
1. Start Countdown Timer
2. Use Calculator
3. Exit
Choose an option (1-3): 1
Enter countdown time (e.g., 10s or 1m): 10s
Countdown started for 10 seconds...
00:10
```

```
εσοφρλεῖ
σμοοεε ου οβρτου (1-3): 3
11ωε,ε ηβῖ
00:01
00:05
00:03
00:04
00:02
00:00
00:0λ
00:08
00:00
3· EXIF
5· ηεε σῆσσηῖσφου
1· 2ῖσῖσφου σσηῖσφου 11ωε
--- σσηῖσφου 11ωε & σῆσσηῖσφου ---
```