WELCOME

TO YOUR PRESENTATION

Project Name: PC Health Checker

Developed By: Robiul Islam Khan
ID: 202310457
Department of Computer Science and Engineering

Tania Akter Minu
ID: 202320508
Department of Computer Science and Engineering

Shohidul Islam Shamol
ID: 202310050
Department of Computer Science and Engineering

Platform: Kali Linux (Bash Script)
Purpose: Real-time system monitoring tool

Project Overview

- The **PC Health Checker** is a Bash-based monitoring utility.
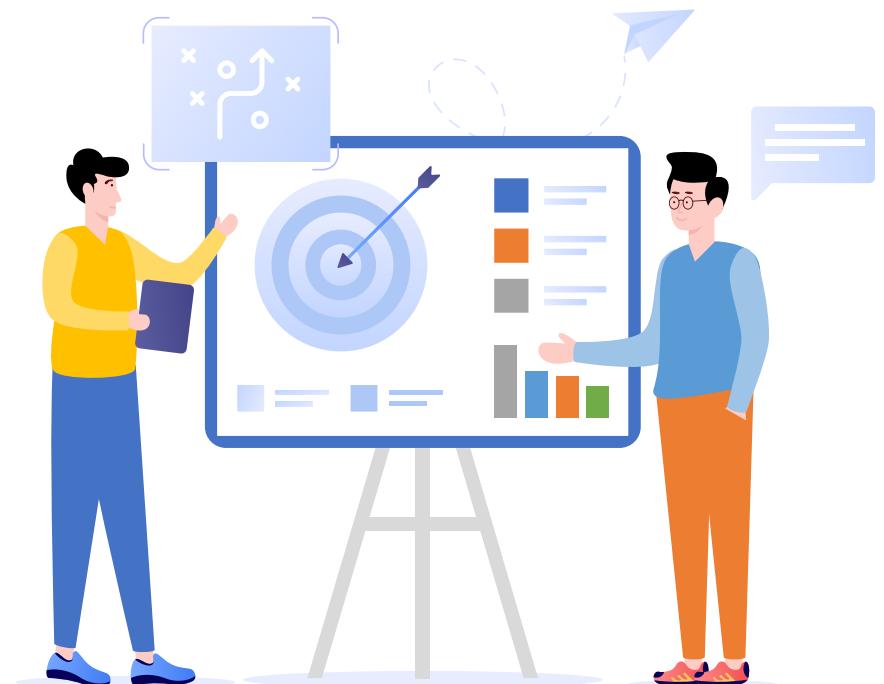
- Continuously collects and displays key system metrics.
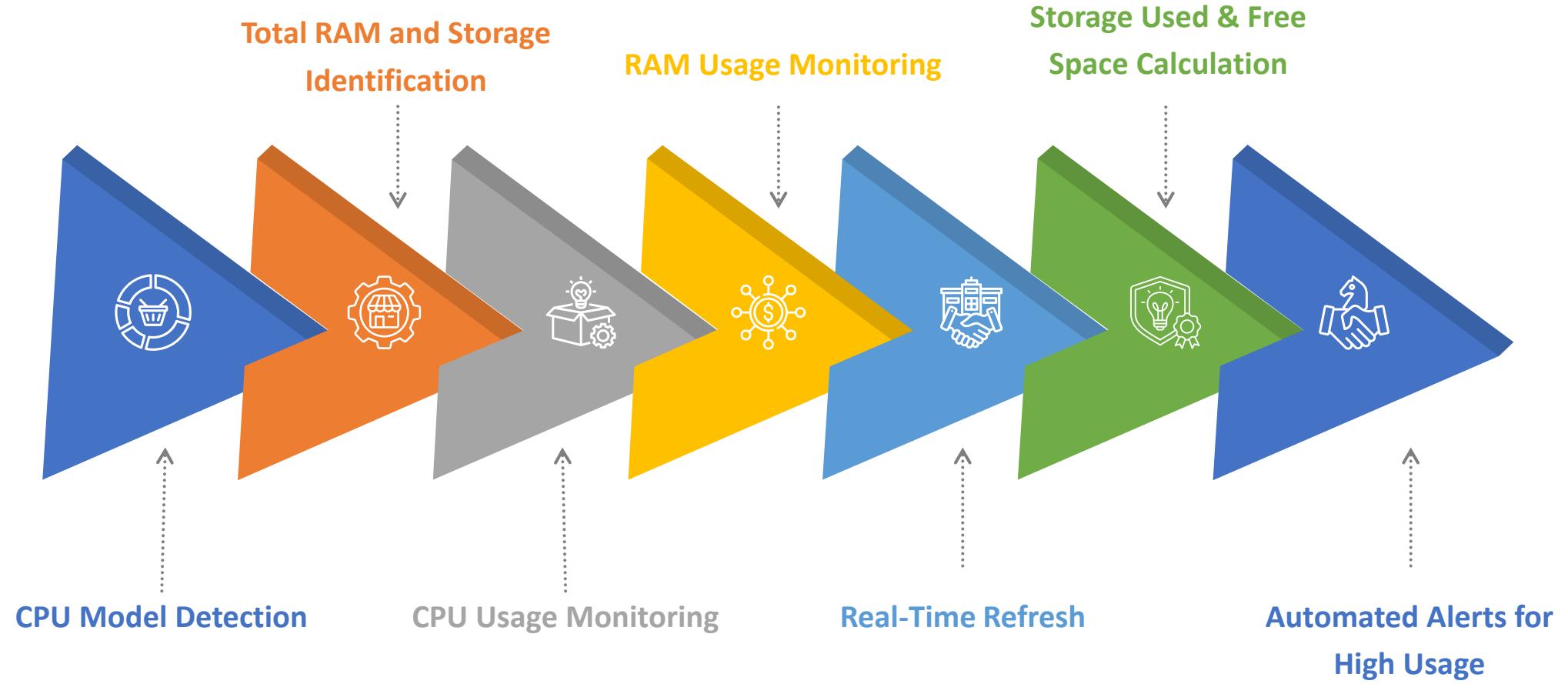
- Alerts user when resource usage exceeds defined thresholds.
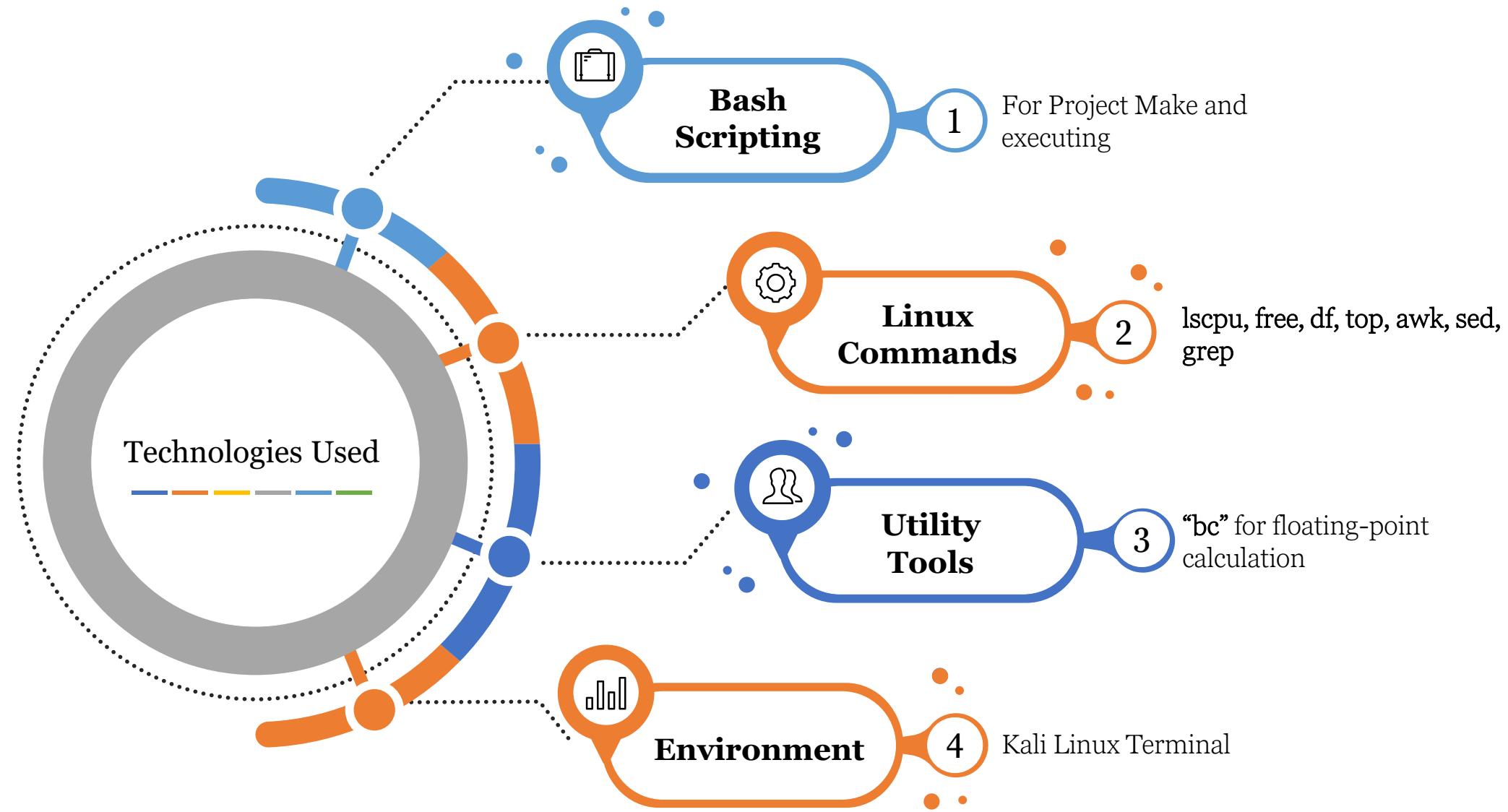
- Lightweight, fast, and suitable for Linux environments.

Key Features

Total RAM and Storage
Identification

RAM Usage Monitoring

Storage Used & Free
Space Calculation

CPU Model Detection

CPU Usage Monitoring

Real-Time Refresh

Automated Alerts for
High Usage

Technologies Used

Bash Scripting

1 — For Project Make and executing

Linux Commands

2 — lscpu, free, df, top, awk, sed, grep

Utility Tools

3 — "bc" for floating-point calculation

Environment

4 — Kali Linux Terminal

Technologies Used

System Metrics Collected

1.CPU Information

- CPU Model
- CPU Usage Percentage

## 2.Memory (RAM) Information

- Total RAM
- RAM Usage (%)
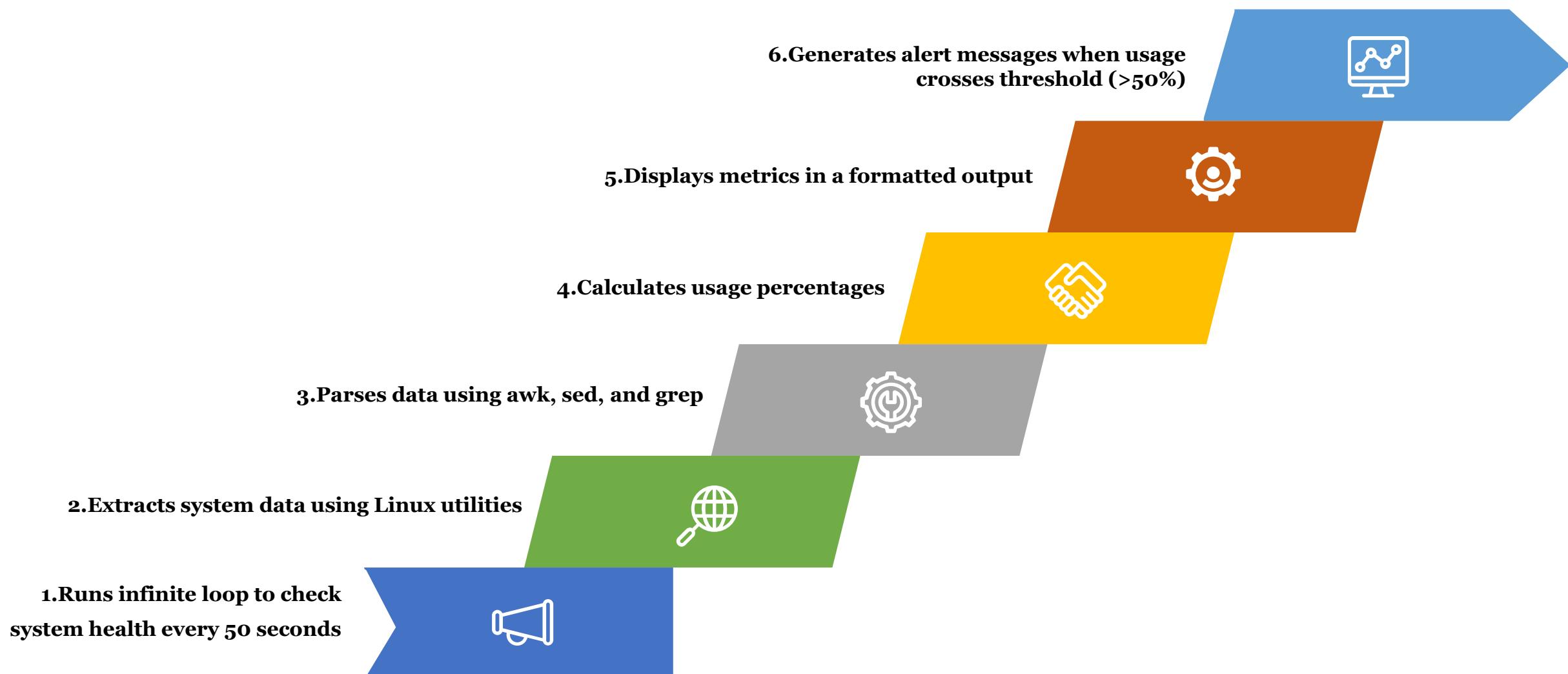
3.Storage Information
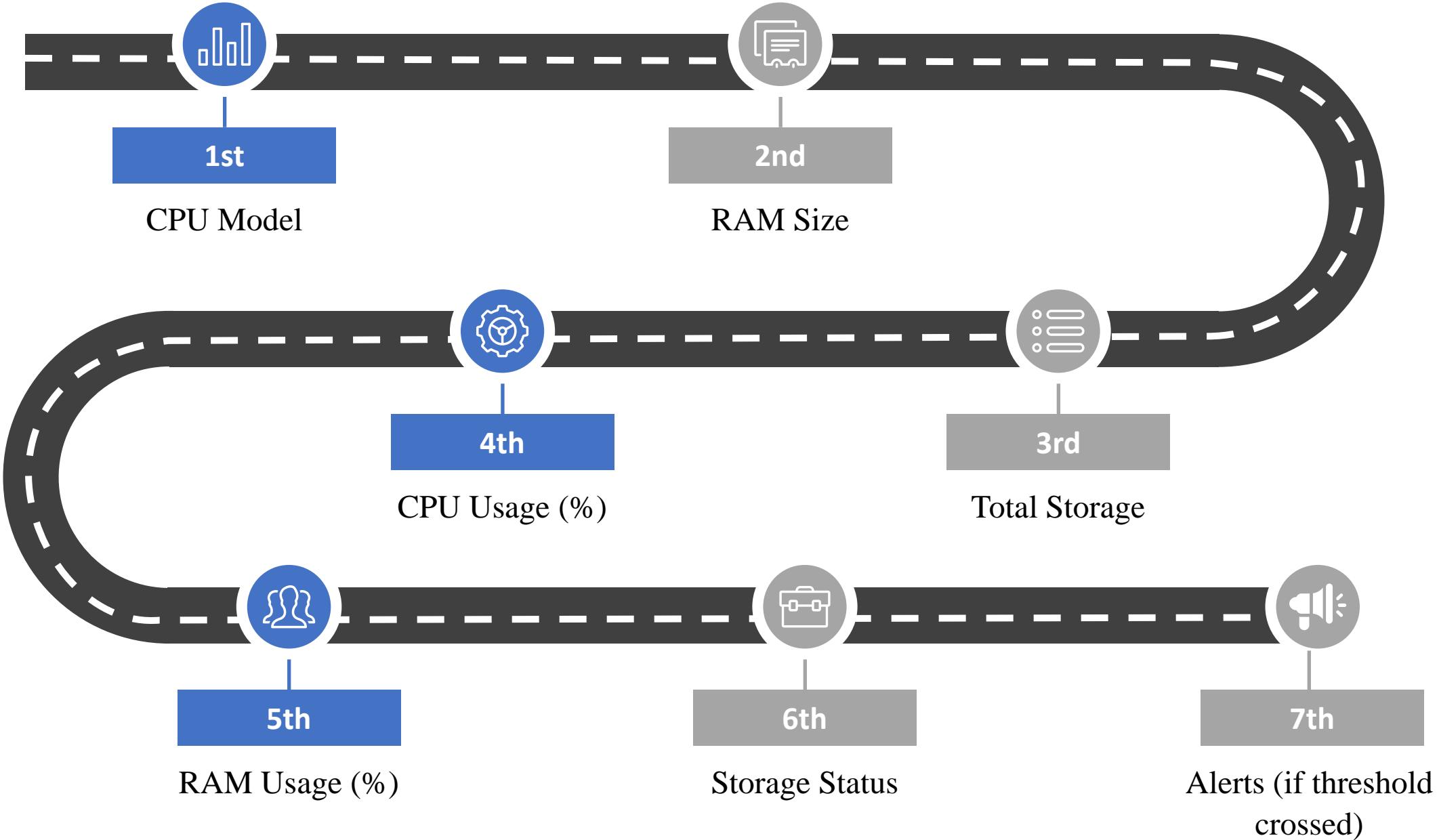
- Total Storage
- Storage Used (GB)
- Storage Free (GB)

How the Script Works

6.Generates alert messages when usage crosses threshold (>50%)

5.Displays metrics in a formatted output

4.Calculates usage percentages

3.Parses data using awk, sed, and grep

2.Extracts system data using Linux utilities

1.Runs infinite loop to check system health every 50 seconds

Script Output Sample

1st

CPU Model

2nd

RAM Size

3rd

Total Storage

4th

CPU Usage (%)

5th

RAM Usage (%)

6th

Storage Status

7th

Alerts (if threshold crossed)
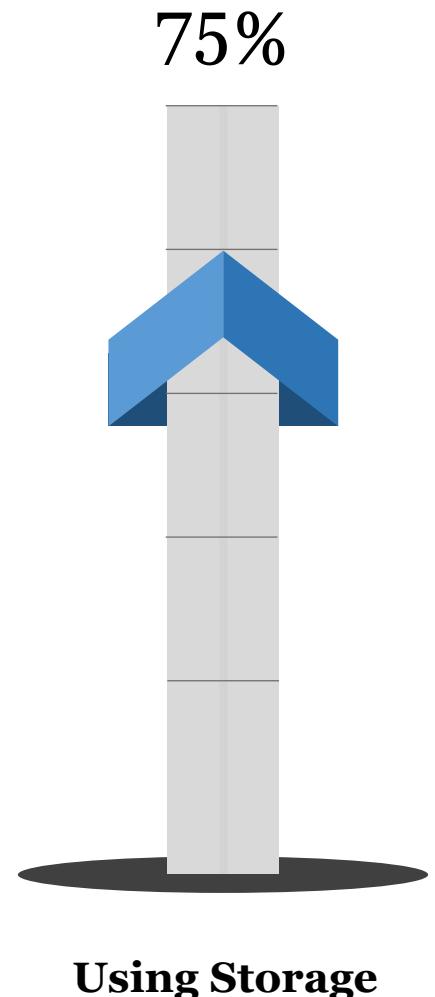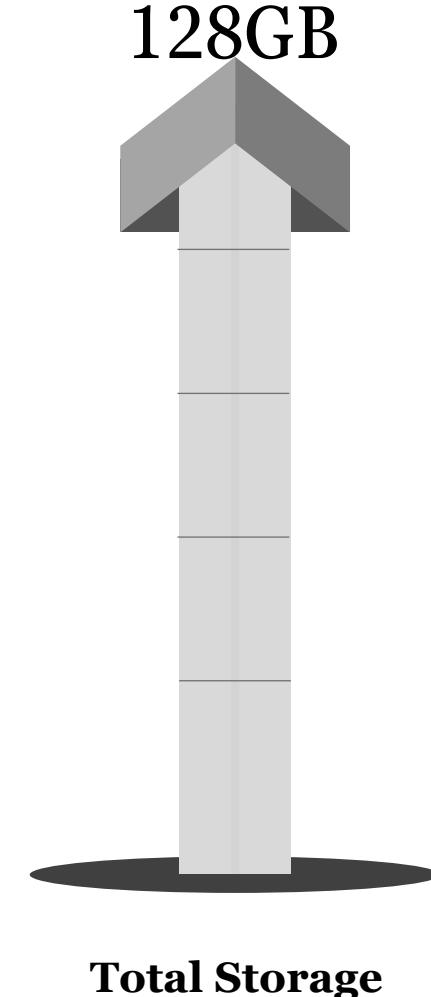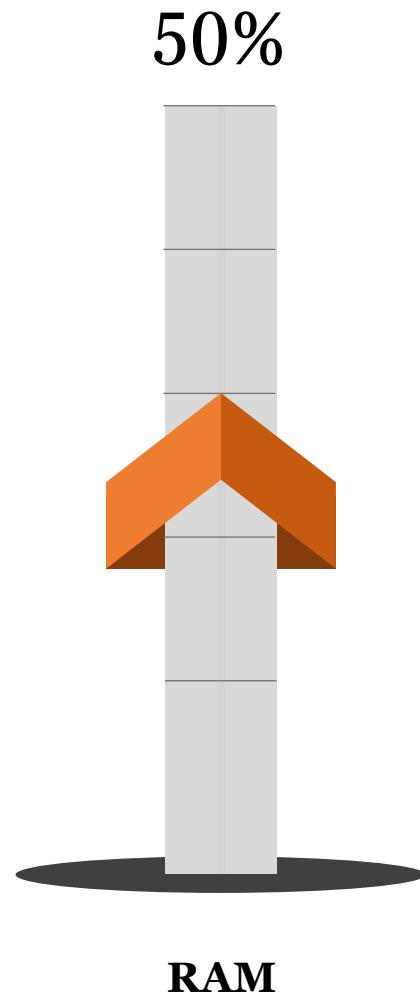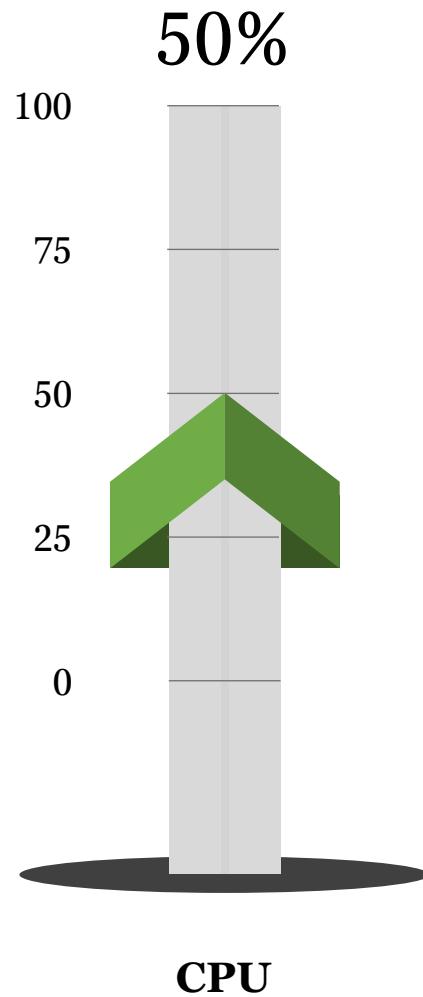
Alerts threshold limit

Advantages of This Tool

- Simple and lightweight
- No external dependencies
- Continuous monitoring
- Customizable alert thresholds
- Suitable for low-resource or older machines

Future Enhancements

Color

1

Add color-coded output (red alert, yellow warning, green normal)

Log File

Add log file support

2

Report

Export health reports to CSV or JSON

3

Online

Implement email or Telegram notifications.

4

GUI Interface

Add GUI using Python/Tkinter or GTK.

5

Run Background

Create a service that runs in the background

2

Conclusion

- The PC Health Checker provides a practical demonstration of Bash scripting.

- Efficient for monitoring system health in real time.

- Good example of Linux automation, system management, and scripting proficiency.

Thank you.

Any questions?