# INFOSOFT IT SOLUTIONS

#### **Training | Projects | Placements**

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# **BASH SCRIPTING**

# **Introduction to BASH Scripting**

- Overview of BASH and its role in Unix/Linux environments
- Basics of shell scripting vs. programming languages
- Setting up a BASH environment (Linux distributions)

# **BASH Scripting Basics**

- BASH syntax and scripting conventions
- Variables and data types (strings, integers, arrays)
- Input and output redirection

#### **Control Structures**

- Conditional statements (if-else, case)
- Looping constructs (for, while, until)
- Using break and continue statements

#### **Functions and Modularization**

- Creating and using functions in BASH scripts
- Passing arguments to functions
- Using return values from functions

#### **File Operations and Text Processing**

- Working with files and directories in BASH
- Reading and writing files
- Text processing utilities (e.g., grep, sed, awk)

#### **Error Handling and Debugging**

- Error handling techniques (exit codes, error messages)
- Debugging BASH scripts (echo debugging, set -x)
- Trap signals and handling script interruptions

#### **Advanced BASH Scripting Techniques**

- Regular expressions in BASH
- Arrays and associative arrays
- Advanced string manipulation

#### **Scripting Best Practices**

- Writing clear and maintainable BASH scripts
- Using comments and documentation
- Code formatting and style conventions

#### **Automation and Task Scheduling**

- Automating tasks with cron jobs
- Creating and scheduling BASH scripts
- Integration with system administration tasks

# **Interacting with System Commands and Services**

- Executing system commands from BASH scripts
- Calling external programs and services
- Managing services and processes

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### **Networking and System Administration Tasks**

- Network-related tasks in BASH (e.g., ping, ssh)
- System administration tasks automation
- · Handling system logs and monitoring