

Python Shell

```
import os

class Shell_Prompt():

    def shell_prompt(self):
        return '$'

    def list_files(self):
        return [file for file in
os.listdir(os.path.realpath(os.path.join(os.getcwd(),
os.path.dirname(__file__)))) if os.path.isfile(file)]

    def print_files(self):
        for x in self.list_files():
            print(x)

    @staticmethod
    def input_error():
        print("Input Error")
        return None

    @staticmethod
    def maths(opp, x, y):
        return {
            'add': lambda: x + y,
            'sub': lambda: x - y,
            'mul': lambda: x * y,
            'div': lambda: x / y,
        }.get(opp)()

Shell = Shell_Prompt()

while True:
    switch = {
        "LIST": lambda: Shell.print_files(),
        "ADD": lambda: print(Shell.maths("add", int(command[1]),
int(command[2]))) if len(command) == 3 else Shell.input_error(),
        "SUB": lambda: print(Shell.maths("sub", int(command[1]),
int(command[2]))) if len(command) == 3 else Shell.input_error(),
        "MUL": lambda: print(Shell.maths("mul", int(command[1]),
int(command[2]))) if len(command) == 3 else Shell.input_error(),
        "DIV": lambda: print(Shell.maths("div", int(command[1]),
int(command[2]))) if len(command) == 3 else Shell.input_error(),
        "EXIT": exit
    }
    command = [x for x in input(Shell.shell_prompt).split(' ')]
    switch.get(command[0], Shell.input_error)()
```

Bandit Report

Test results:
No issues identified.

Code scanned:

Total lines of code: 33
Total lines skipped (#nosec): 0

Run metrics:

Total issues (by severity):
 Undefined: 0
 Low: 0
 Medium: 0
 High: 0
Total issues (by confidence):
 Undefined: 0
 Low: 0
 Medium: 0
 High: 0

Files skipped (0):

Potential Security Flaws still exist

- Type Conversion by passing in a type the program is not expecting we could cause the
- Command Extension