1.Given the toatal seconds,compute and print equivalent hours,minutes,and seconds using arithmetic operations.

```
A.sec=45600
 minute=sec/60
 hours=minute/60
 print(sec)
 print(minute,"minute")
 print(hours,"hours")
 output:760 minutes
     12.66 hours
     45600 seconds
```

2.Assign the price and quantity of two products.calculate the toatal cost including 18% tax.print a detailed bill.

```
A.price_1=250
 quantity_1=2
 price_2=300
 quantity_2=3
 total_cost=(price_1*quantity_1)+(price_2*quantity_2)
 tax=total_cost*18/100
 print("tax is",tax)
 print("total cost is",total cost)
 output:tax is 297
     total cost is 1650
```

3.compute the perimeter and area of a circle given a radius.use the value of π from the math module.

```
A.import math
 radius=10
 perimeter=2*math.pi*radius
 area=math.pi*radius**radius
 print(perimeter)
 print(area)
 output:62.8318530717985
```

31415926535.897

4.Given a temperature in celsius,convert it to Fahrenheit using the formula and print both values.

(F=Cx9/5+32)

A.celsius=25

```
fahrenheit_temp=celsius*9/5+25

print("the temperature in celsius",celsius)

print("the temperature in fahrenheit",fahrenheit_temp)
```

output:the temperature in celsius is 25

the temperature in fahrenheit is 70

5.what is a compiled language?what is an interpreted language?

explain pros and cos of each.how hybrid languages bring in advantages of both.

A.A compiled languages source code is tranform by a compiler into native machine code before execution.The resulting executive runs directly on hardware.

PROS:

HIGH PERFORMANCE & EFFICIENCY:native machine code runs fast,with optimizations applied at compiler time

EARLY ERROR DETECTION:compile-time type and syntax checks catch errors before runtime.

CONS:

PLATFORM DEPENDENCE:binaries are specific to OS/CPU;need recompilation for the environments.

SLOWER EDIT-COMPILER-RUN WORKFLOW:large projects may have laong compile times

A interpreted languages,an interpreter reads and executes code line-by-line at runtime,either directly from source or via an intermediate from like

bytecode.

PROS:

RAPID DEVELOPMENT:no compile step;code changes take effect immediately.

BETTER DEBUGGING & INTERACTIVITY:ideal for REPLs,protyping,and scripting.

CONS:

SLOWER EXECUTION:interpretation introduces runtime overhaed.

HIGHER RESOURCE USAGE:interpreters consume more memory and cpu.

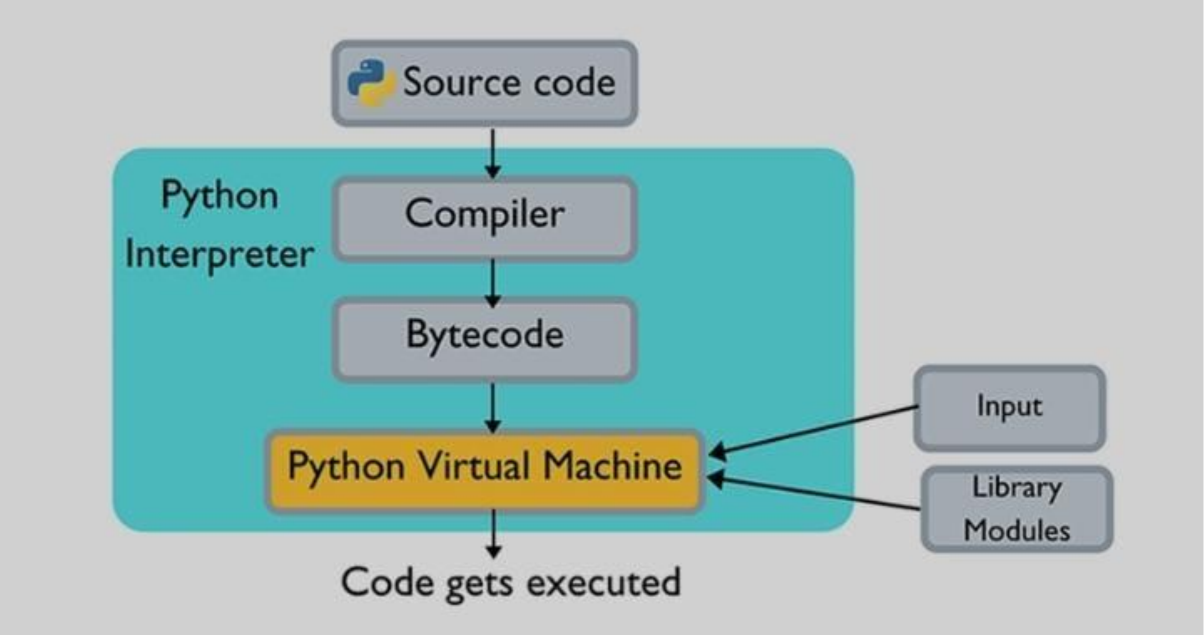
A hybrid language use a blend of compilation and interpretation-typically compiling source to bytecode,then interpreting and using just-in-time compilers for runtime optimization.

ADAVANTAGES:

CROSS-PLATFORM PORTABILITY:bytecode runs on any platform with the runtime environment.

RUNTIME PERFORMANCE BOOST:jit compiles hot code paths to native code dynamically.

6.Draw the diagram of how a python program is execute


Source code
Python Interpreter
Compiler
Bytecode
Python Virtual Machine
Input
Library Modules
Code gets executed