General Maths - 1

Nos: Integers
Whole nos
Natural nos
real nos
complex nos

Decimal:

125

10^2 10^1 10^0

100 10 1

$= (100 \times 1) + (10 \times 2) + (1 \times 5)$

$= 100 + 20 + 5$

$= 125$

1.25

10^0 10^{-1} 10^{-2}

$= (1 \times 10^0)$

$= 1$

$= (2 \times 10^{-1}) + (5 \times 10^{-2})$

$= 2 \times 0.1 + 5 \times 0.01$

$= 0.20 + 0.05$

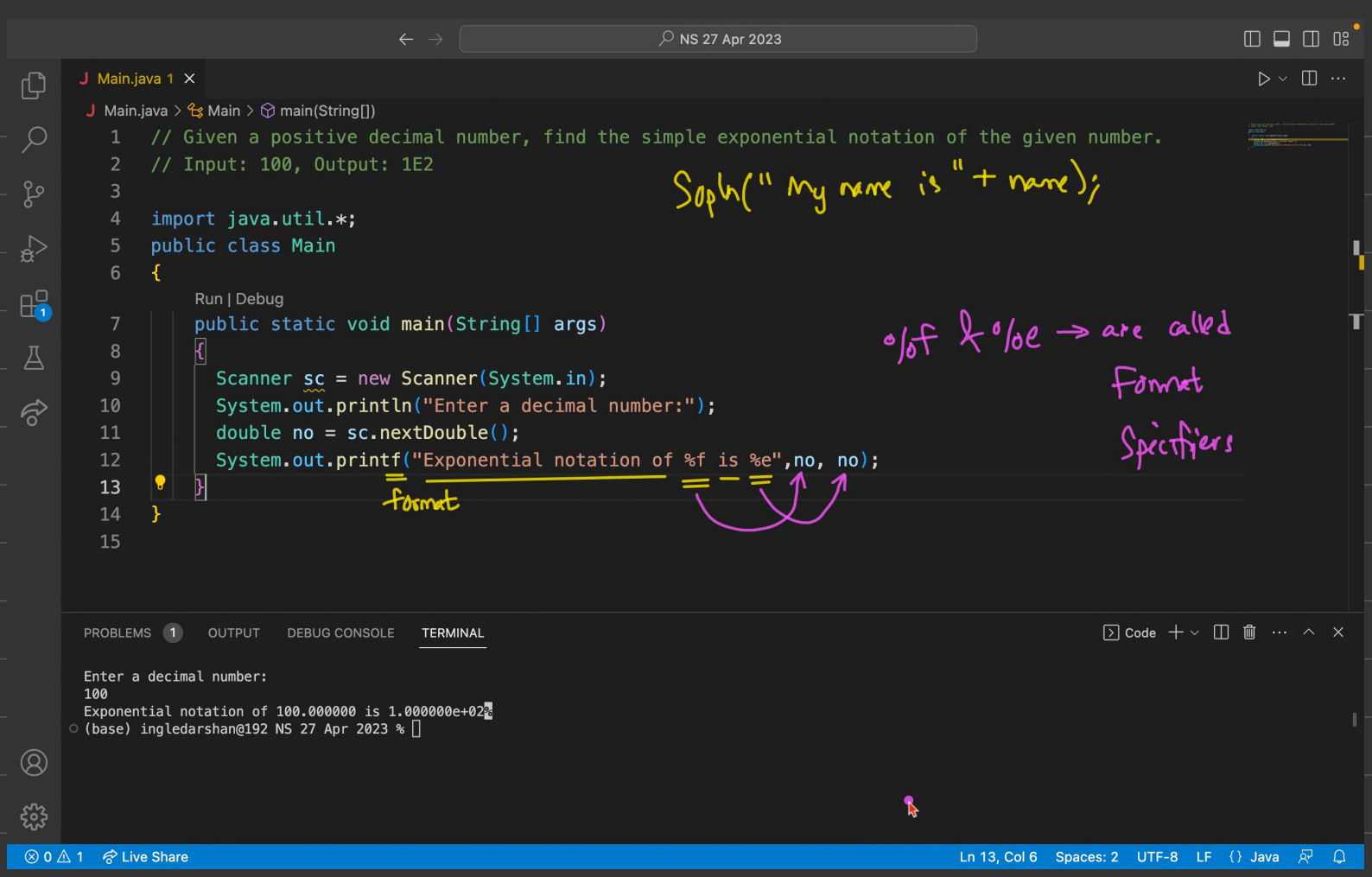
$= 0.25$

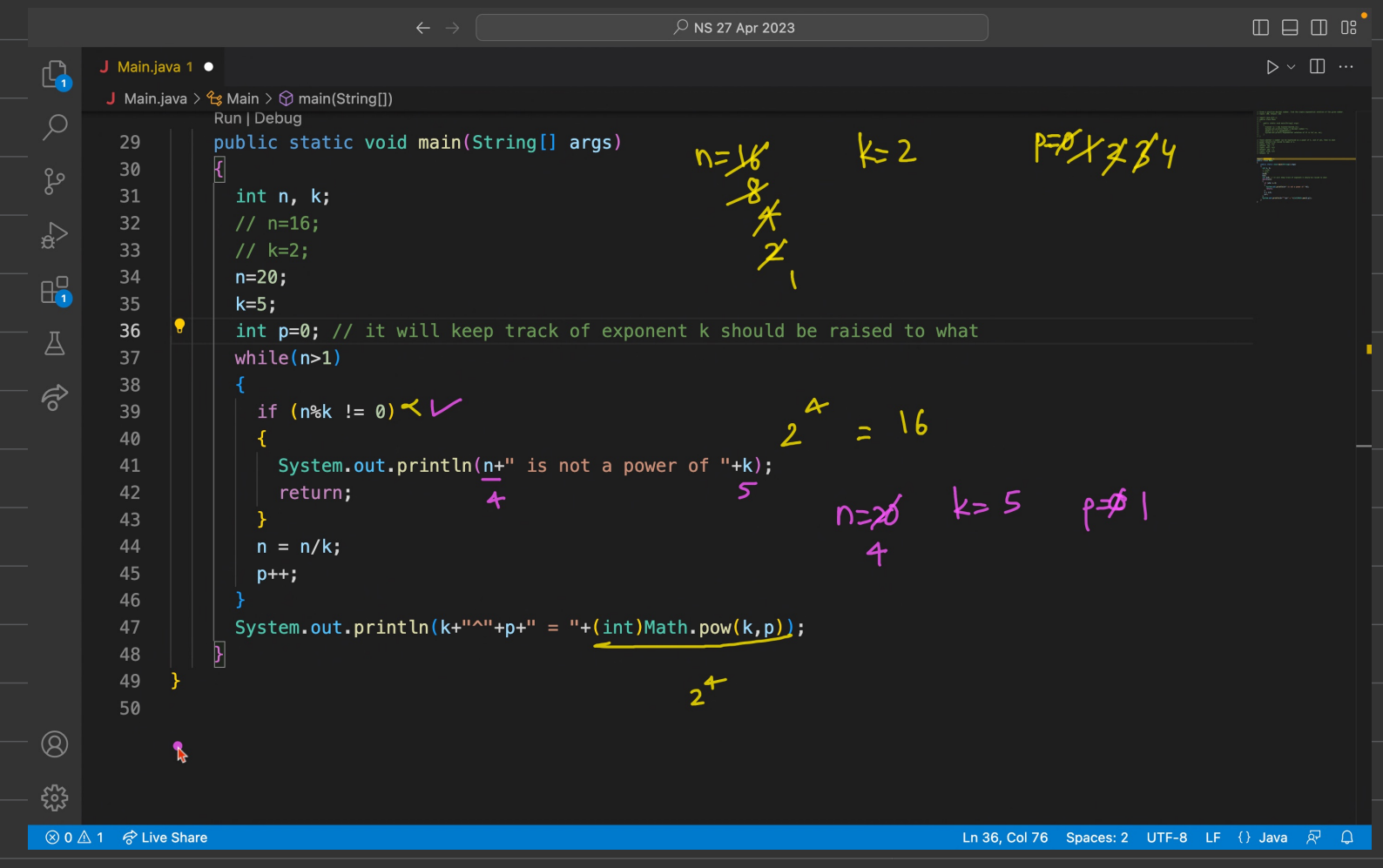
Octal (8), Hexadecimal (16)

Decimal to binary, octal, hexadecimal
Binary to Octal to Hexadecimal

5.5×10^6

Mantissa exponent


NS 27 Apr 2023
Main.java 1
Main.java > Main > main(String[])
// Given a positive decimal number, find the simple exponential notation of the given number.
// Input: 100, Output: 1E2
Sopln(" My name is " + name);
import java.util.*;
public class Main
{
Run | Debug
public static void main(String[] args)
{
Scanner sc = new Scanner(System.in);
System.out.println("Enter a decimal number:");
double no = sc.nextDouble();
System.out.printf("Exponential notation of %f is %e",no, no);
}
}
%of & %oe → are called Format Specifiers
format
PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL
Code
Enter a decimal number:
100
Exponential notation of 100.000000 is 1.000000e+02
(base) ingledarshan@192 NS 27 Apr 2023 %
0 1 Live Share
Ln 13, Col 6 Spaces: 2 UTF-8 LF Java


NS 27 Apr 2023
Main.java 1
Main.java > Main > main(String[])
Run | Debug
public static void main(String[] args)
{
int n, k;
// n=16;
// k=2;
n=20;
k=5;
int p=0; // it will keep track of exponent k should be raised to what
while(n>1)
{
if (n%k != 0)
{
System.out.println(n+" is not a power of "+k);
return;
}
n = n/k;
p++;
}
System.out.println(k+"^"+p+" = "+(int)Math.pow(k,p));
}
}
n=16 8 4 2 1
k=2
p=0 1 2 3 4
2^4 = 16
n=20 4
k=5
p=0 1
0 1 Live Share
Ln 36, Col 76 Spaces: 2 UTF-8 LF Java