

Assignments for 07-Dec-17

1. Write a Python program to accept user input (with input() function) of integer (binary, octal, decimal and Hexadecimal), float (using decimal or exponent formats, e and E) and strings (all 3 ways) and print the user entered values.
2. Write a Python program to perform the following:
 - Assign integer (decimal) value to a variable and print the variable
 - Assign integer (binary) value to a variable and print the variable
 - Assign integer (octal) value to a variable and print the variable
 - Assign integer (hexa-decimal) value to a variable and print the variable
3. Write the steps in Python to perform the following data type conversions:
 - Assign values in binary, octal, hexadecimal, decimal, print the values using int() function with explicit base. Also print the type of the values.
 - Assign values in binary, octal, hexadecimal, decimal, print the values using long() function with explicit base. Also print the type of the values.
 - Accept an integer from user, convert to float and print the number.
 - Accept 3 integers, convert them to strings, add the 3 strings and display the resultant string
 - Accept a string from user, print char and its integer value for all the characters (No need to use loops)
 - Accept an integer (between 65 and 90), print its equivalent character (No need of loops or conditional statements)
 - Accept an integer (decimal) from user, print in binary, octal, decimal and hexadecimal formats
 - Accept an integer (binary) from user, print in binary, octal, decimal and hexadecimal formats
 - Accept an integer (octal) from user, print in binary, octal, decimal and hexadecimal formats
 - Accept an integer (hexadecimal) from user, print in binary, octal, decimal and hexadecimal formats
 - Accept an integer from user, pass to octal function and print
 - Accept an integer from user, convert to binary, pass to octal function and print
 - Accept an integer from user, pass to hexadecimal function and print
 - Accept an integer from user, convert to binary, pass to hexadecimal function and print
 - Accept an integer from user, convert to octal, pass to hexadecimal function and print
4. Perform the following with bit-wise operators (check manually with system generated results)
 - v1 = 45, v2 = 56, perform v1 & v2, v1 | v2, v1 ^ v2, ~v1, ~v2, v1 << 1, v1 >> 2
 - v1 = 034, v2 = 045, perform v1 & v2, v1 | v2, v1 ^ v2, ~v1, ~v2, v1 << 2, v1 >> 3
 - v1 = 0xAB, v2 = 0x89, perform v1 & v2, v1 | v2, v1 ^ v2, ~v1, ~v2, v1 << 2, v1 >> 3
 - v1 = 0b11011100, v2 = 0b01101010, perform v1 & v2, v1 | v2, v1 ^ v2, ~v1, ~v2, v1 << 2, v1 >> 3
5. Write a program to perform the setting and clearing bits of 2nd and 4th respectively of variable v1, say, v1 = 0xCD, check the results

| Positions | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | Result |
|--|---|---|---|---|---|---|---|---|--------|
| v1 = 0xCD | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0xCD |
| Setting 2 nd bit of v1 (position 1) | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0xCF |
| Clearing 4 th bit of v1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0xC5 |

