Practical 19 April

1) WAP called `printStarArray` which prompts the user for the number of items in an array (a non-negative integer). It then prompts the user for the values of all the items (non-negative integers) and saves them in an `int` array called `items`. The program shall then print the contents of the array in a graphical form, with the array index and values represented by the number of stars.

```
Enter the number of items: 5
Enter the value of all items (separated by space): 7 4 3 0 7
0: *******(7)
1: ****(4)
2: ***(3)
3: (0)
4: *******(7)
```

2) Write a program called `Hex2Bin` that prompts the user for a hexadecimal string and prints its equivalent binary string.

```
Enter a Hexadecimal string: 1abc
The equivalent binary for hexadecimal "1abc" is: 0001 1010 1011 1100
```

Hint: Use an array of 16 Strings containing binary strings corresponding to hexadecimal number 0-9A-F (or a-f), as follows:

```
String[] HEX_BITS = {"0000", "0001", "0010", "0011",
              "0100", "0101", "0110", "0111",
              "1000", "1001", "1010", "1011",
              "1100", "1101", "1110", "1111"};
```

3) A working Java program is all scrambled up. Reconstruct the code snippets to make a working Java program that produces the following output. You may use as many curly braces as you want to.

```
int y = 0;
```

```
ref = index[y];
```

```
islands[0] = "Bermuda";
islands[1] = "Fiji";
islands[2] = "Azores";
islands[3] = "Cozumel";
```

```
int ref;
while (y < 4) {
```

```
System.out.println(islands[ref]);
```

```
index[0] = 1;
index[1] = 3;
index[2] = 0;
index[3] = 2;
```

```
String [] islands = new String[4];
```

```
System.out.print("island = ");
```

```
int [] index = new int[4];
```

```
y = y + 1;
```

```
class TestArrays {

  public static void main(String [] args) {
```

```
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% java TestArrays
island = Fiji
island = Cozumel
island = Bermuda
island = Azores
```