Name: _____   **Email PID:** _____

Question   Recall the `elfHash()` function:

```java
public static int elfHash(String toHash) {

    int hashValue = 0;                                    // 1

    for (int Pos = 0; Pos < toHash.length(); Pos++) {     // 2

        hashValue = (hashValue << 4) + toHash.charAt(Pos);  // 3

        int hiBits = hashValue & 0xF0000000;              // 4

        if (hiBits != 0)                                  // 5

            hashValue ^= hiBits >> 24;                     // 6

        hashValue &= ~hiBits;                             // 7
    }

    return hashValue;                                     // 8
}
```

What is the purpose of the code in lines 4 – 6?

WHAT the code does is copy the high nybble (4 bits) of the current `hashValue` and fold it back into the current `hashValue` before the high nybble would be shifted out on the next pass through the loop.

The PURPOSE of doing this is to prevent the effect of that nybble (and the corresponding character) from being lost as nybbles are shifted out. This way, every character continues to have an effect on the final computed `hashValue`.