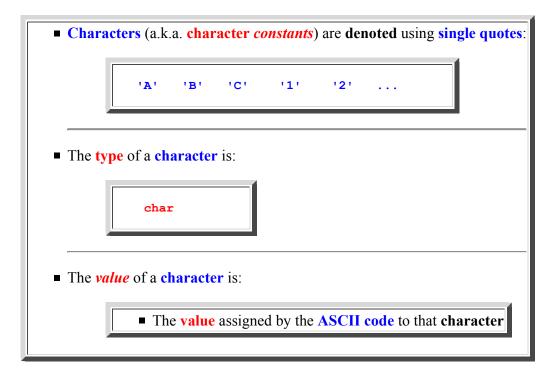
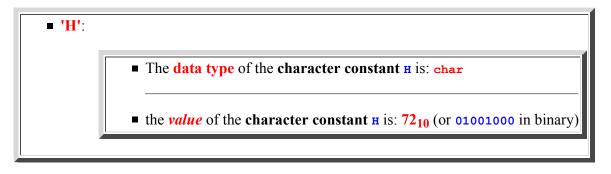
Working with ASCII code in Java

- Characters in a programming language
 - Characters:



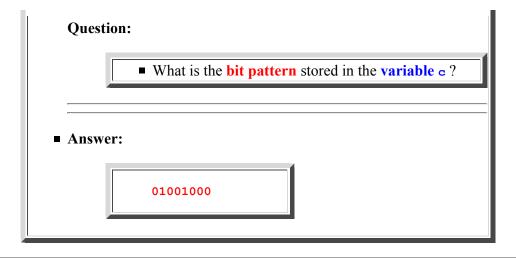
• Example:



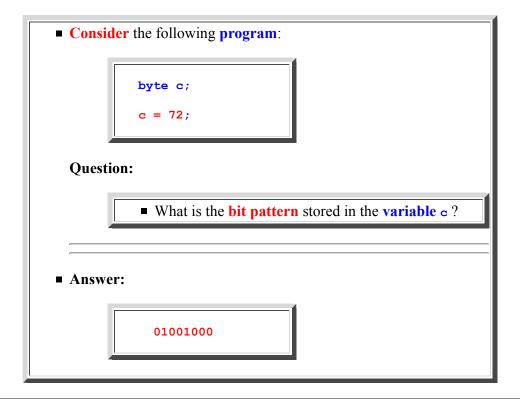
• **Quiz 1**:

```
■ Consider the following program:

char c;
c = 'H';
```



• **Quiz 2**:



○ Note:

■ The character constant H that is represented by the binary pattern 01001000
■ The unsigned value 72₁₀ that is represented by the same binary pattern 01001000

is:

■ The data type !!!

(Remember the Java compiler use the data type as context to interpret (= decode) the values !!!)

- Strings
 - String:

```
■ String = a sequence of characters
```

- Casting between character type and integer type
 - In Java, we can cast between char and byte (or short or int) data types:

```
byte b;
char c;
b = (byte) c;  // Casts character value in c to byte type
c = (char) b;  // Casts byte value in b to char type
```

- What happens in a cast operation between character data type and integer data type:
 - The **bit pattern** is **copied**
 - The *type* is **changed** !!!
- Example 1:

```
// the 2's complement code 01001000
```

Example Program: (Demo above code)

Example

■ Prog file: <u>click here</u>

How to run the program:

- **Right click** on link(s) and **save** in a scratch directory
- To compile: javac CastingCharl.java
- To run: java CastingChar1

• Example 2:

Example Program: (Demo above code)



■ Prog file: <u>click here</u>

How to run the program:

- Right click on link(s) and save in a scratch directory
- To compile: javac CastingChar1.java
- To run: java CastingChar1

○ Quiz:

■ What is the output of:

char c;
byte b;

```
c = 'H';
b = (byte) c;
b++;
c = (char) b;
System.out.println(c); // ???????
```

Answer:

