I have a few questions about legal operations.

would the following be considered a legal operations:
var x = 3 ;
"2" ^ x ;

if so, should we just be able to handle all possible combinations of variables, single quoted strings, and numbers with the exception being double quoted strings?

I don't know what you mean by "single quoted strings".

Is x in your example to be a number? I think a reasonable answer, within the context of exponentiation (and other mathematical operations), is yes. So, yes, you should handle those situations. For strings combined with strings, only addition needs to be supported.

I know you touched on this in Tuesday's class, but to be clear, the only valid operation between two strings is concatenation for the '+' operator? -*/&^ all are invalid operations?

Also, should the "types" of variables be preserved in assignment operations? i.e. If var num is declared and initialized to the value 4, can it be reassigned to 4.0? Or "four"?

Strings can be combined with strings only with addition. Types of variables may change.