

Basic Perl program:

```
#!/usr/bin/perl
use strict;
use warnings;
use diagnostics;
print "Hello World!\n";
```

Make executable and run:

```
chmod u+x helloworld.pl
./helloworld.pl
```

Declare and initialize variables:

```
my $sequence = "ACTC";
```

Numeric operators:

```
2 + 2;    addition
7.5 - 3;  subtraction
5 * 4;    multiplication
9 / 3;    division
```

String operators:

```
"ATCG" . "CCCG" = "ATCGCCCG"
"ATCG" x 3 = "ATCGATCGATCG"
```

Autoincrement/Autodecrement:

```
$count++;
```

Backslash escape characters:

<code>\n</code>	Newline
<code>\r</code>	Return
<code>\t</code>	Tab
<code>\f</code>	Formfeed
<code>\b</code>	Backspace
<code>\a</code>	Bell
<code>\e</code>	Escape (ASCII escape character)
<code>\007</code>	Any octal ASCII value (here, 007 = bell)
<code>\x7f</code>	Any two-digit, hex ASCII value (here, 7f = delete)
<code>\cC</code>	A "control" character (here, Ctrl-C)
<code>\\</code>	Backslash
<code>\"</code>	Double quote
<code>\l</code>	Lowercase next letter
<code>\L</code>	Lowercase all following letters until \E

Comparison operators:

Comparison	Numeric	String
Equal	<code>==</code>	<code>eq</code>
Not equal	<code>!=</code>	<code>ne</code>
Less than	<code><</code>	<code>lt</code>
Greater than	<code>></code>	<code>gt</code>
Less than or equal to	<code><=</code>	<code>le</code>
Greater than or equal to	<code>>=</code>	<code>ge</code>

if statements:

```
my $sequence_1 = "ATCG";
my $sequence_2 = "ATCG";
```

```
if ($sequence_1 eq $sequence_2) {
    print "Sequences are identical\n";
}
```

if + else statements:

```
if ($sequence_1 eq $sequence_2) {
    print "Sequences are identical\n";
} else {
    print "Sequences are not identical\n";
}
```

Logical operators:

```
if (condition_1 && condition_2) {
    print "Both conditions are true! ";
} elsif (condition_1 || condition_2) {
    print "At least one or the other condition is true";
}
```

elsif statements:

```
if (condition) {
    do something;
} elsif (condition){
    do something else;
} elsif (condition){
```