*Exercise 3: Class/Type (class\_vs\_type.cc)*

***Explained***

* **This exercise has us experiment with creating const and non-const object pointers.**

***A picture containing shape

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* **“LINE 1” -** We start off by instantiating the string x with “hello”.
* **“LINE 2” -** Here we create a string reference called “rx” and point it to “x”. This uses the copy constructor to point the new variable “rx”’s pointer to “x”, resulting in “x” now having two things pointing at it.
* **“LINE 3” –** This line is doing the same as in “LINE 2” except the variable name here is now “crx” and it is a const string. This implies that “crx” is immutable.
* **Now we print out the address of all three proving the above hypothesis correct.**
* **“LINE 4, LINE 5, and LINE 6” –** As we can see in the screenshot below, line 6 seems. Top cause a crash. Lines 4&5 work normally and append to our original string “x” as expected, but Line 6 does not. This is because, to reiterate, “ string const & crx = x;” is a const reference to x. Even though x itself is not const, because the thing pointing to it (in this case “crx”) is calling “crx.append()” won’t be allowed.

***Text

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