





IF YOU KEEP SAYING "BEAR WITH ME FOR A MOMENT", PEOPLE TAKE A WHILE TO FIGURE OUT THAT

YOU'RE JUST SHOWING THEM RANDOM SLIDES.

xkcd.com/365



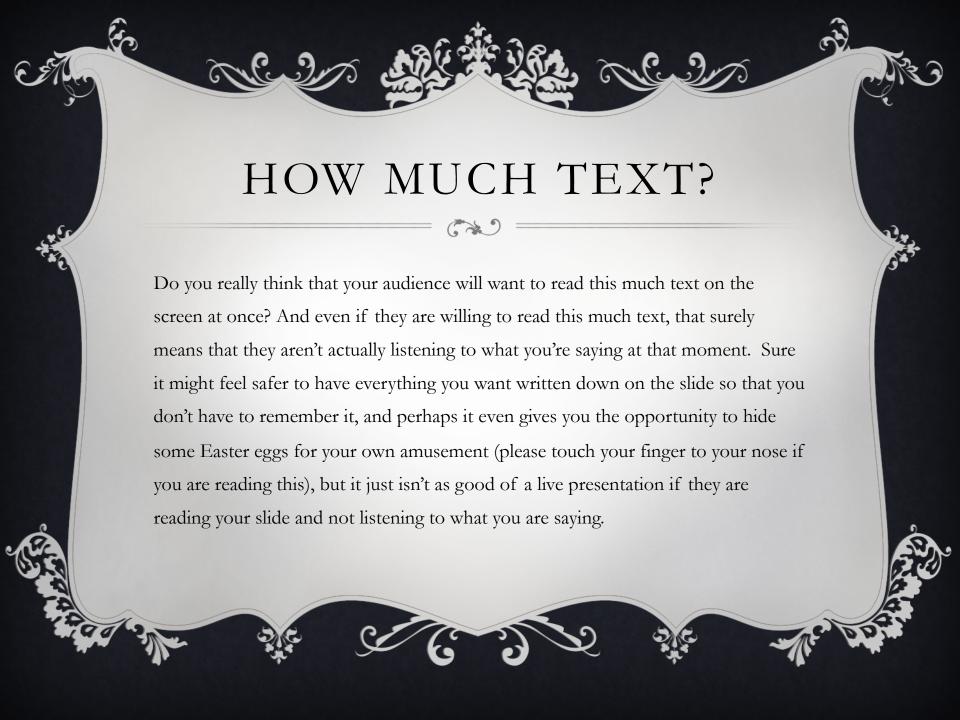












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HOW MUCH CODE?

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def remove(self, posn):
 """Remove the item at the given iterator."""
 if not isinstance(posn, self.iterator):
   raise TypeError("Must provide valid iterator for remove")
 self._size -= 1
 walk = posn._nd
 if walk.left is None or walk.right is None:
   self._easyDelete(walk)
   # use predecessor as sub for the current node
   sub = walk.left.subtreeMax()
   # fix pointer from above
   if self._root is walk:
     self._root = sub
   elif walk is walk.parent.left:
     walk.parent.left = sub
     walk.parent.right = sub
   # relocate sub and remove walk
   if sub is not walk.left:
     # clean up below
     sub.parent.right = sub.left
     if sub.left is not None:
       sub.left.parent = sub.parent
     # sub takes over left child of walk
     sub.left = walk.left
     walk.left.parent = sub
   # sub takes over right child of walk
   sub.right = walk.right
   walk.right.parent = sub
   # sub gets new parent
   sub.parent = walk.parent
   # restore heap property from sub downward
   downward = True
```

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while downward:
     child = sub.left
     if sub.right is not None and (child is None or sub.right.priority < child.priority):
       child = sub.right
     if child is not None and child.priority < sub.priority:
       self._rotateUp(child)
     else:
       downward = False
def _rotateUp(self, walk):
 """Rotate node walk up one level.
 Assumes that walk is not the root (but parent may be)
 parent = walk.parent
 grand = parent.parent
 walk.parent = grand
 parent.parent = walk
 if parent.left is walk:
   parent.left = walk.right
   if walk.right is not None:
     walk.right.parent = parent
   walk.right = parent
 else:
   parent.right = walk.left
   if walk.left is not None:
     walk.left.parent = parent
   walk.left = parent
 if grand is None:
   self._root = walk
   if grand.left is parent:
     grand.left = walk
   else:
     grand.right = walk
```











