Princeton University
COS 217: Introduction to Programming Systems
Hash Table Fundamental Algorithms

Informally...

```
boolean put(key, value)
{
   hashcode = hash(key)
   bucketnum = hashcode % bucketcount
   if (the bucket at index bucketnum contains a binding with the given key)
      return FALSE
   insert a new binding containing key and value into that bucket
   return TRUE
}



value get(key)
{
   hashcode = hash(key)
   bucketnum = hashcode % bucketcount
   if (the bucket at index bucketnum contains a binding with the given key)
      return that binding's value
   return NULL
}



boolean remove(key)
{
   hashcode = hash(key)
   bucketnum = hashcode % bucketcount
   if (the bucket at index bucketnum contains a binding with the given key)
      remove that binding from that bucket
      return TRUE
   return FALSE
}
```