python

```
'\x80\x04'
# PROTO 4
# Tell the PM that we are using protocol version 4. This is the default
since Python 3.8.
# Protocol versions 3-5 can not be unpickled by Python 2.x.

'\x95\x16\x00\x00\x00\x00\x00\x00\x00'
# FRAME 16
# Essentially we are telling the PM that the serialized data is 16 bytes
long.
# The argument is calculated like this:
# `struct.pack("<Q",
len(b']\x94(\x8c\x03HTB\x94K{G@\x1f\x14z\xe1G\xae\x14e.')) =
b'\x16\x00\x00\x00\x00\x00\x00'`.

']'
# EMPTY_LIST
# Pushes an empty list onto the stack.
# Eventually, we will append the items to this list after we have defined
them.

'\x94'
# MEMOIZE
# This stores the object on the top of the stack in the 'memo' which is akin
to long-term memory.
# The memo is used to keep transient objects alive during pickling.
# In this case we are 'memozing' the empty list we just pushed onto the
stack.
# This opcode is called when pickling any of the following types:
# - __reduce__
# - bytes
# - bytearray
# - string
# - tuple
# - list
# - dict
# - set
# - frozenset
# - global
```

```
'('
# MARK
# Pushes the special 'markobject' on the stack.
# This will be referred to later as the starting point for our array items.


'\x8c\x03HTB'
# SHORT_BINUNICODE 3 HTB
# Pushes the unicode string with length 3 'HTB' onto the stack.


'\x94'
# MEMOIZE
# We tell the PM to 'memoize' the string that we just pushed onto the stack.


'K{'
# BININT1 {
# Pushes a 1-byte unsigned int with value 123 onto the stack.
# '{' is the byte representation of 123 calculated as so:
# `chr(123) = b'{'`


'G@\x1f\x14z\xe1G\xae\x14'
# BINFLOAT @\x1f\x14z\xe1G\xae\x14
# Pushes a float with the value 7.77 onto the stack.
# '@\x1f\x14z\xe1G\xae\x14' is the 8-byte float encoding of 7.77 which is
calculated like this:
# `struct.pack(">d", 7.77) = b'@\x1f\x14z\xe1G\xae\x14'`


'e'
# APPENDS
# We are telling the PM to extend the empty list on the stack with all items
we just defined back up until the 'markobject' we defined earlier.


'.'
# STOP
# This is how we tell the PM we are at the end of the pickle.
# The original array `['HTB', 123, 7.77]` was recreated and now sits at the
top of the stack.
```