1. Design a class `vector`

```
class vector
{
private:
  double* a; // pointer to an array
  int n;     // number of elements
public:
  // default constructor, sets a = 0
  vector();

  // constructor, allocates dynamically memory for the array
  vector( int nn );

  // destructor, frees the memory
  ~vector();

  // returns the ith element
  double operator[]( int i );

  // copies elements of b to a, returns *this
  vector&  operator=( double* b );

  // makes of copy of v, returns *this
  vector& operator=( vector& v );

  // prints elements
  void show();
};
```

   Test the objects of a `vector`-class with a suitble main program