

```
1  #include "Student.h"
2  #include<string>
3  #include<iostream>
4  #include<vector>
5
6  using namespace std;
7
8
9  Student::Student()
10 {
11 }
12
13 Student::Student(string name, int age, int stID)
14 {
15     this->name = name;
16     this->age = age;
17     this->studentID = stID;
18 }
19
20
21 Student::~~Student()
22 {
23 }
24
25 void Student::printInfo()
26 {
27 }
28 }
29
30 int main()
31 {
32     vector <Student*> roster;
33     Graduate mJ("Keith Richards", "You Can't Always Get What You Want", "Mick Jagger", 26, 1234);
34     roster.push_back(&mJ);
35     Graduate pS("Art Garfunkel", "Kodachrome", "Paul Simon", 32, 9876);
36     roster.push_back(&pS);
37     Undergraduate jF(3, 62, "John Fogerty", 24, 1654);
38     roster.push_back(&jF);
39     Undergraduate nY(2, 27, "Neil Young", 25, 5731);
40     roster.push_back(&nY);
41     Graduate eJ("Bernie Taupin", "Rocket Man", "Elton John", 25, 3426);
42     roster.push_back(&eJ);
43     Undergraduate tester;
44     tester.printDifferentObjects(roster);
45     cout << "Press 'X' to exit: " << endl;
46     char command;
47     cin >> command;
48     if (command == 'X')
49     {
50         return 0;
51     }
```

```
52
53 }
54
55 Undergraduate::Undergraduate() :Student()
56 {
57
58 }
59
60 Undergraduate::Undergraduate(int year, int numCourses, string name, int age, int id)
61     :Student(name, age, id)
62 {
63     this->year = year;
64     this->coursesCompleted = numCourses;
65     this->name = name;
66     this->age = age;
67     this->studentID = id;
68 }
69
70 void Undergraduate::printInfo()
71 {
72     cout << "Undergraduate Student: " << name << "\t" << "Age: " << age << "\t" <<
73         << "ID: " << studentID << endl;
74     cout << "Year: " << year << "\t" << "Number of courses: " << coursesCompleted <<
75         << endl;
76 }
77 Graduate::Graduate() :Student()
78 {
79 }
80
81 Graduate::Graduate(string advisorName, string title, string name, int age, int id)
82     :Student(name, age, id)
83 {
84     this->advisorName = advisorName;
85     this->thesisTitle = title;
86     this->name = name;
87     this->age = age;
88     this->studentID = id;
89 }
90
91 void Graduate::printInfo()
92 {
93     cout << "Graduate Student: " << name << "\t" << "Age: " << age << "\t" <<
94         << "ID: " << studentID << endl;
95     cout << "Advisor: " << advisorName << "\t" << "Thesis: " << thesisTitle <<
96         << endl;
97 }
98
99 void Student::printDifferentObjects(vector <Student*> roster)
```

```
98 {
99
100     for (int i = 0; i < roster.size(); i++)
101     {
102         roster[i]->printInfo();
103     }
104 }
105
```