

A terminal window with a dark background and light gray text. The window title bar at the top shows three colored window control buttons (red, yellow, green) on the left, followed by the text "DNS Programming Assignment — Python dnsserver.py 127.0.0.1 9999 — 92x24". The terminal content shows a shell prompt "thedudesmacbook:DNS Programming Assignment thedude\$" followed by the command "python3 dnsserver.py 127.0.0.1 9999". The output of the command is "DNS Server Ready to Receive:", and a small gray cursor is visible on the line below.

```
thdudesmacbook:DNS Programming Assignment thedude$ python3 dnsserver.py 127.0.0.1 9999
DNS Server Ready to Receive:
```

```
DNS Programming Assignment — -bash — 124x37
thedudesmacbook:DNS Programming Assignment thedude$ python3 dnsclient.py 127.0.0.1 9999 host123.student.test A IN
Sending Request to 127.0.0.1, 9999
Message ID: 35
Question Length: 25 bytes
Answer Length: 0 bytes
Question: host123.student.test A IN

Received Response from 127.0.0.1, 9999
Return Code: 0 (No errors)
Message ID: 35
Question Length: 25 bytes
Answer Length: 52 bytes
Question: host123.student.test A IN
Answer: host123.student.test A IN 3600 192.168.120.123

thedudesmacbook:DNS Programming Assignment thedude$ python3 dnsclient.py 127.0.0.1 9999 host-not-exist.student.test A IN
Sending Request to 127.0.0.1, 9999
Message ID: 54
Question Length: 32 bytes
Answer Length: 0 bytes
Question: host-not-exist.student.test A IN

Received Response from 127.0.0.1, 9999
Return Code: 1 (Name does not exist)
Message ID: 54
Question Length: 32 bytes
Answer Length: 0 bytes
Question: host-not-exist.student.test A IN
thedudesmacbook:DNS Programming Assignment thedude$ python3 dnsclient.py 127.0.0.1 9999 host-not-exist.student.test A IN
Sending Request to 127.0.0.1, 9999
Message ID: 63
Question Length: 32 bytes
Answer Length: 0 bytes
Question: host-not-exist.student.test A IN

Request timed out ...
Sending Request to 127.0.0.1, 9999
```

```
DNS Programming Assignment — -bash — 124x37
Answer Length: 0 bytes
Question: host123.student.test A IN
[
Received Response from 127.0.0.1, 9999
Return Code: 0 (No errors)
Message ID: 35
Question Length: 25 bytes
Answer Length: 52 bytes
Question: host123.student.test A IN
Answer: host123.student.test A IN 3600 192.168.120.123

thedudesmacbook:DNS Programming Assignment thedude$ python3 dnsclient.py 127.0.0.1 9999 host-not-exist.student.test A IN
Sending Request to 127.0.0.1, 9999
Message ID: 54
Question Length: 32 bytes
Answer Length: 0 bytes
Question: host-not-exist.student.test A IN

Received Response from 127.0.0.1, 9999
Return Code: 1 (Name does not exist)
Message ID: 54
Question Length: 32 bytes
Answer Length: 0 bytes
Question: host-not-exist.student.test A IN
thedudesmacbook:DNS Programming Assignment thedude$ python3 dnsclient.py 127.0.0.1 9999 host-not-exist.student.test A IN
Sending Request to 127.0.0.1, 9999
Message ID: 63
Question Length: 32 bytes
Answer Length: 0 bytes
Question: host-not-exist.student.test A IN

Request timed out ...
Sending Request to 127.0.0.1, 9999
Request timed out ...
Sending Request to 127.0.0.1, 9999
Request timed out ... Exiting Program.
thedudesmacbook:DNS Programming Assignment thedude$
```