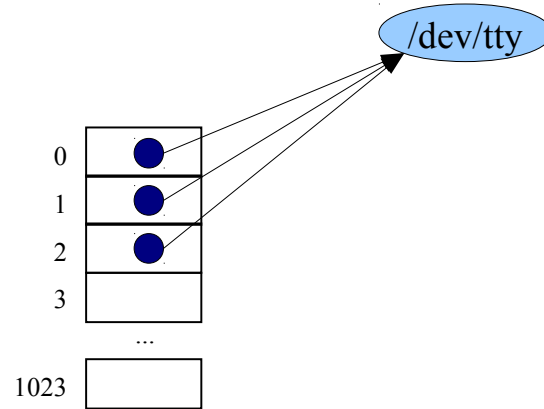# Princeton University
COS 217: Introduction to Programming Systems
Trace of testdupin

```
% gcc217 testdupin.c -o testdupin
```

Princeton University
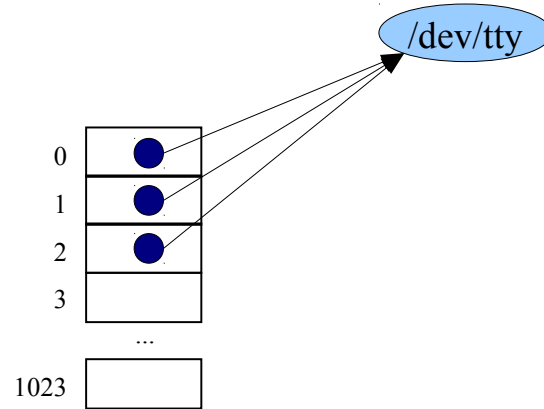## COS 217: Introduction to Programming Systems
Trace of testdupin

```
% ./testdupin
```

/dev/tty

0	●
1	●
2	●
3	
...	
1023	

```
int main(void)
{
   int iFd;
   char acBuffer[100];
   iFd = open("tempfile", O_RDONLY);
   close(0);
   dup(iFd);
   close(iFd);
   fgets(acBuffer, 100, stdin);
   fputs(acBuffer, stdout);
   return 0;
}
```

```
% ./testdupin
```

/dev/tty

0	●
1	●
2	●
3	
...	
1023	

```
int main(void)
{
   int iFd;
   char acBuffer[100];
   iFd = open("tempfile", O_RDONLY);
   close(0);
   dup(iFd);
   close(iFd);
   fgets(acBuffer, 100, stdin);
   fputs(acBuffer, stdout);
   return 0;
}
```

Princeton University
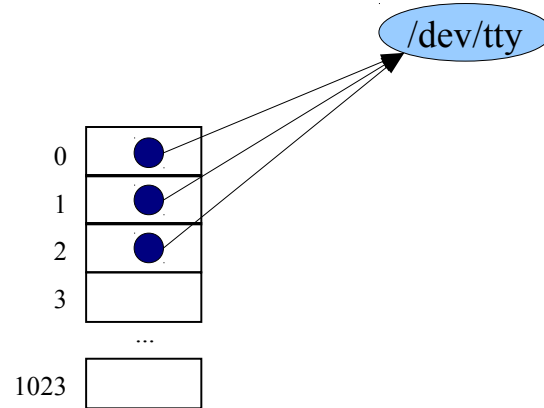COS 217: Introduction to Programming Systems
Trace of testdupin

```
% ./testdupin
```

/dev/tty

```
0  ●
1  ●
2  ●
3
   ...
1023
```

```
int main(void)
{
   int iFd;
   char acBuffer[100];
   iFd = open("tempfile", O_RDONLY);
   close(0);
   dup(iFd);
   close(iFd);
   fgets(acBuffer, 100, stdin);
   fputs(acBuffer, stdout);
   return 0;
}
```

```
% ./testdupin
```

/dev/tty   tempfile

0
1
2
3
...
1023

```
int main(void)
{
   int iFd;
   char acBuffer[100];
   iFd = open("tempfile", O_RDONLY);
   close(0);
   dup(iFd);
   close(iFd);
   fgets(acBuffer, 100, stdin);
   fputs(acBuffer, stdout);
   return 0;
}
```
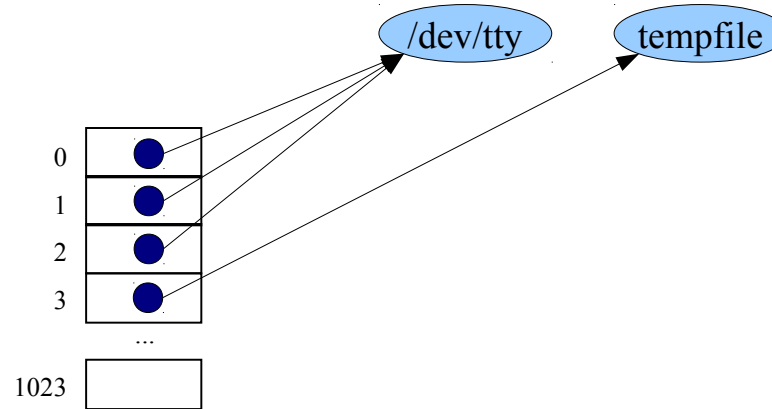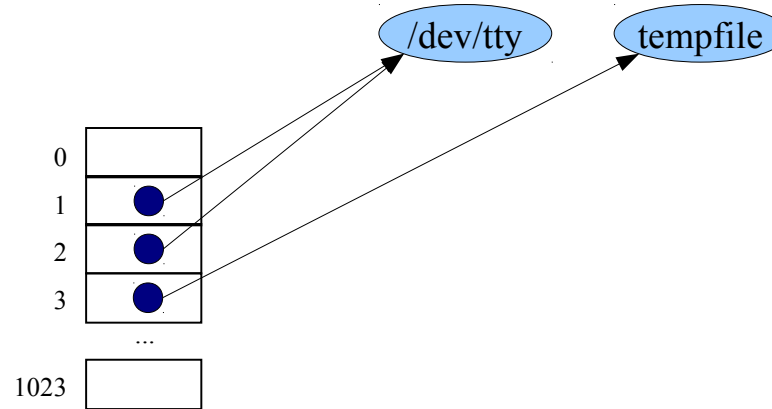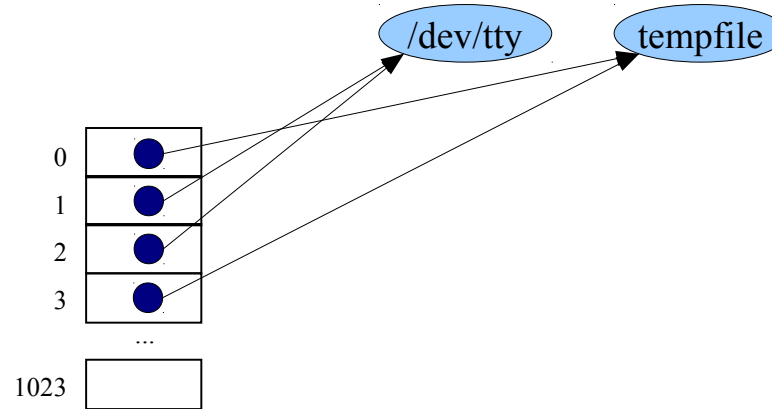
3

```
% ./testdupin
```



```
int main(void)
{
   int iFd;
   char acBuffer[100];
   iFd = open("tempfile", O_RDONLY);
   close(0);
   dup(iFd);
   close(iFd);
   fgets(acBuffer, 100, stdin);
   fputs(acBuffer, stdout);
   return 0;
}
```
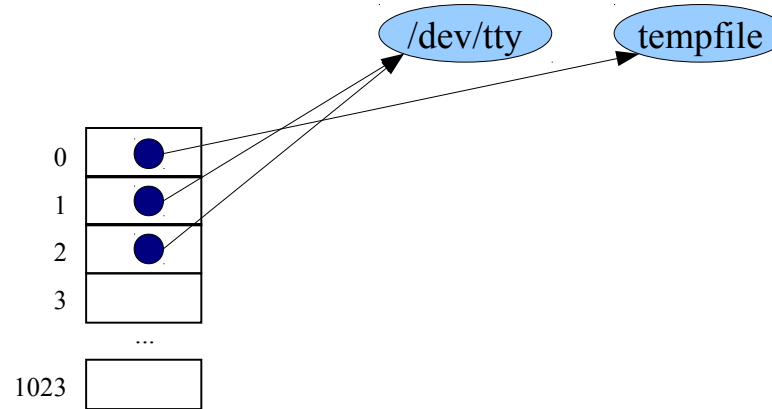
```
% ./testdupin
```



```
int main(void)
{
    int iFd;
    char acBuffer[100];
    iFd = open("tempfile", O_RDONLY);
    close(0);
    dup(iFd);
    close(iFd);
    fgets(acBuffer, 100, stdin);
    fputs(acBuffer, stdout);
    return 0;
}
```

7

Princeton University
COS 217: Introduction to Programming Systems
Trace of testdupin

% ./testdupin

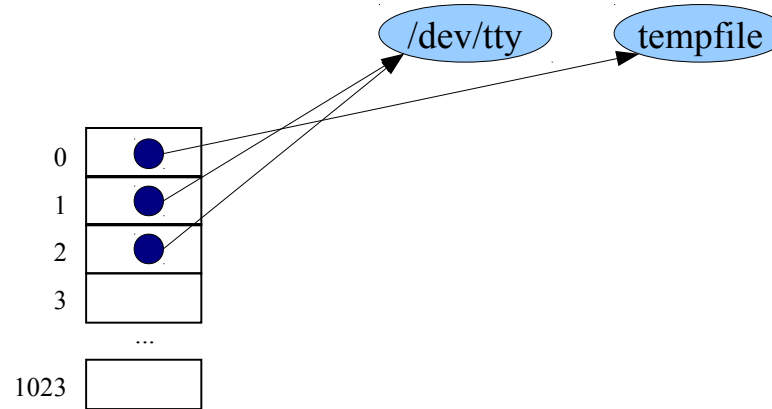/dev/tty   tempfile

0
1
2
3
...
1023

```
int main(void)
{
   int iFd;
   char acBuffer[100];
   iFd = open("tempfile", O_RDONLY);
   close(0);
   dup(iFd);
   close(iFd);
   fgets(acBuffer, 100, stdin);
   fputs(acBuffer, stdout);
   return 0;
}
```

3

```
% ./testdupin
```

/dev/tty   tempfile

```
0  ●
1  ●
2  ●
3
...
1023
```
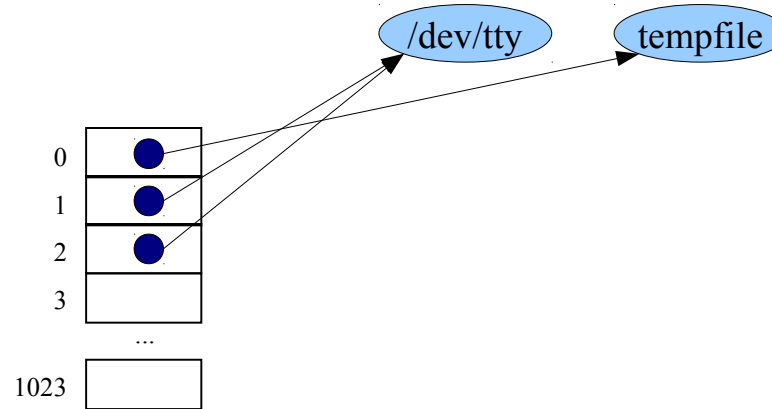
```
int main(void)
{
    int iFd;
    char acBuffer[100];
    iFd = open("tempfile", O_RDONLY);
    close(0);
    dup(iFd);
    close(iFd);
    fgets(acBuffer, 100, stdin);
    fputs(acBuffer, stdout);
    return 0;
}
```

3

somedata\n

Reads from stdin (alias tempfile):
somedata\n

9

```
% ./testdupin
```

/dev/tty   tempfile

```
          0  ●
          1  ●
          2  ●
          3
             ...
       1023
```

```
int main(void)
{
   int iFd;                          3
   char acBuffer[100];
   iFd = open("tempfile", O_RDONLY);
   close(0);
   dup(iFd);                  somedata\n
   close(iFd);
   fgets(acBuffer, 100, stdin);
   fputs(acBuffer, stdout);
   return 0;
}
```

Writes to stdout (alias /dev/tty)::
somedata\n

Princeton University
COS 217: Introduction to Programming Systems
Trace of testdupin

```
% ./testdupin
```

/dev/tty   tempfile

0
1
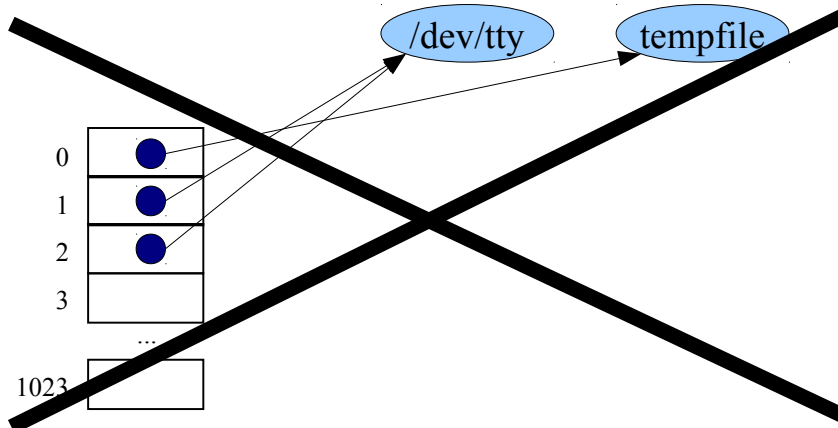2
3
...
1023

```
int main(void)
{
   int iFd;
   char acBuffer[100];
   iFd = open("tempfile", O_RDONLY);
   close(0);
   dup(iFd);
   close(iFd);
   fgets(acBuffer, 100, stdin);
   fputs(acBuffer, stdout);
   return 0;
}
```

3

somedata\n

11

Princeton University
COS 217: Introduction to Programming Systems
Trace of testdupin

%