UCB College Admissions Case

In [40]:
```
# Load up the data and make it so I don't need to type nearly as much.
data <- UCBAdmissions

# Filter out each department.
depA <- data[,,1]
depB <- data[,,2]
depC <- data[,,3]
depD <- data[,,4]
depE <- data[,,5]
depF <- data[,,6]

# Calculate total Male Acceptance Rate.
TMAR <- (depA[1,1]+depB[1,1]+depC[1,1]+depD[1,1]+depE[1,1]+depF[1,1])/
(
    depA[1,1]+depB[1,1]+depC[1,1]+depD[1,1]+depE[1,1]+depF[1,1]+depA[2
,1]
    +depB[2,1]+depC[2,1]+depD[2,1]+depE[2,1]+depF[2,1])
print("Total Male Acceptance Rate:")
TMAR

# Calculate total Female Acceptance Rate.
TFAR <- (depA[1,2]+depB[1,2]+depC[1,2]+depD[1,2]+depE[1,2]+depF[1,2])/
(
    depA[1,2]+depB[1,2]+depC[1,2]+depD[1,2]+depE[1,2]+depF[1,2]+depA[2
,2]
    +depB[2,2]+depC[2,2]+depD[2,2]+depE[2,2]+depF[2,2])
print("Total Female Acceptance Rate:")
TFAR

# Calculate Male Acceptance Rate for each department.
damara <- depA[1,1]/(depA[2,1]+depA[1,1])
dbmara <- depB[1,1]/(depB[2,1]+depB[1,1])
dcmara <- depC[1,1]/(depC[2,1]+depC[1,1])
ddmara <- depD[1,1]/(depD[2,1]+depD[1,1])
demara <- depE[1,1]/(depE[2,1]+depE[1,1])
dfmara <- depF[1,1]/(depF[2,1]+depF[1,1])

# Calculate Female Acceptance Rate for each department.
dafara <- depA[1,2]/(depA[2,2]+depA[1,2])
dbfara <- depB[1,2]/(depB[2,2]+depB[1,2])
dcfara <- depC[1,2]/(depC[2,2]+depC[1,2])
ddfara <- depD[1,2]/(depD[2,2]+depD[1,2])
defara <- depE[1,2]/(depE[2,2]+depE[1,2])
dffara <- depF[1,2]/(depF[2,2]+depF[1,2])

# Pull together the Acceptance Rates into two more convenient vectors.
mar <- c(damara,dbmara,dcmara,ddmara,demara,dfmara)
far <- c(dafara,dbfara,dcfara,ddfara,defara,dffara)

# Pull together the two vectors into an even more convenient matrix.
```

```
AccFrame <- cbind(mar,far)

# Assign some usefull names.
row.names(AccFrame)<-c("Dept A","Dept B","Dept C","Dept D","Dept E","D
ept F")

# Transpose the matrix so it will plot the way I want it to.
AccFrame <- t(AccFrame)

# Plot the results.
barplot(AccFrame, col = c('blue','pink') , beside = TRUE,
        legend = c('Male Acceptance Rate', 'Female Acceptance Rate'),
       main = "Acceptance Rate By Department")
```

```
[1] "Total Male Acceptance Rate:"
```

0.445187662578967

```
[1] "Total Female Acceptance Rate:"
```

0.303542234332425