

, 7M

(7M =

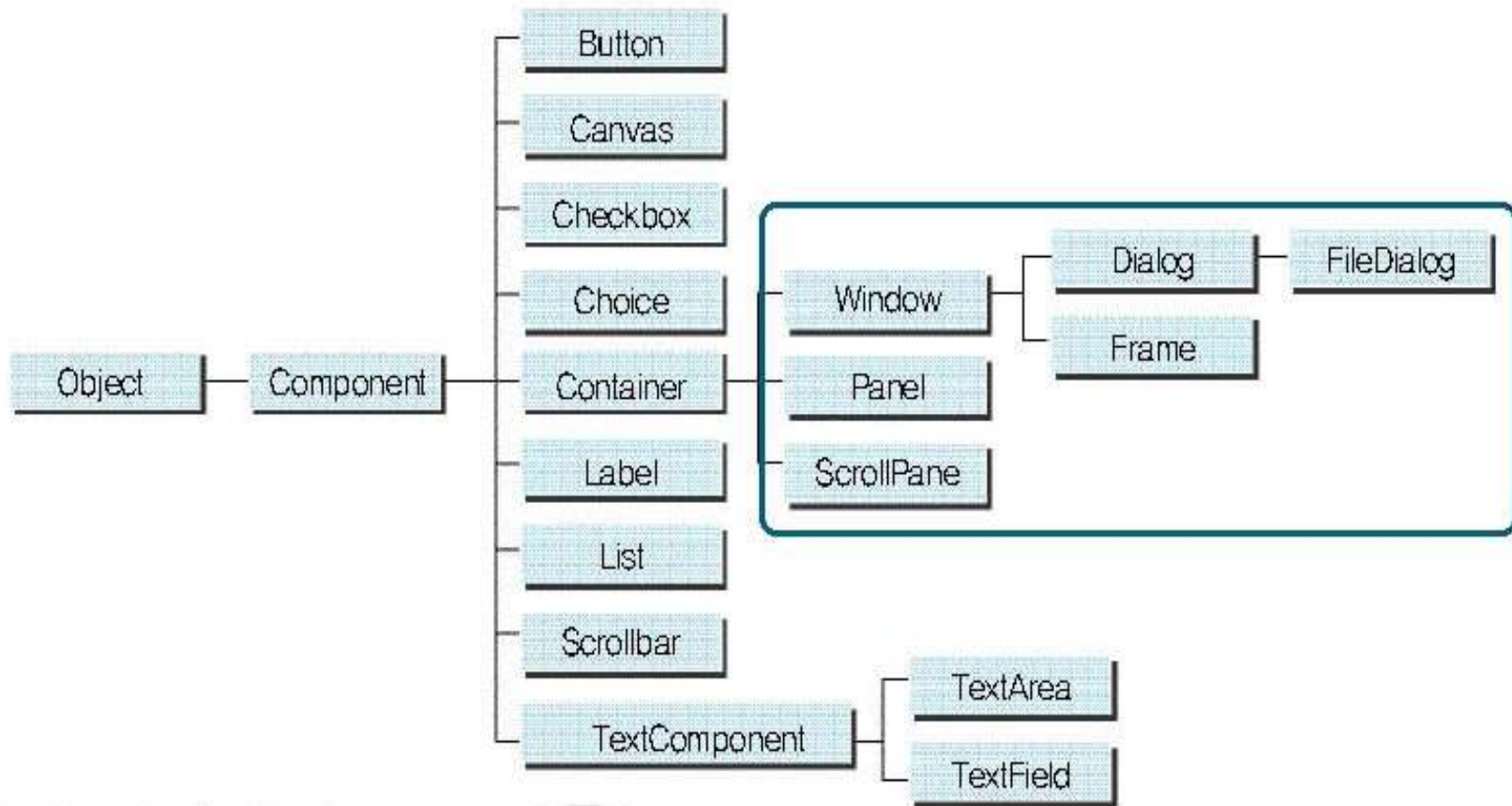
최 문 환



25장 AWT를 이용한 GUI 작성

1. AWT
2. Container 클래스
3. 프레임 창 닫기
4. 배치관리자
5. Panel 컨테이너

1. AWT



Component 클래스에 속하는 중요한 메서드

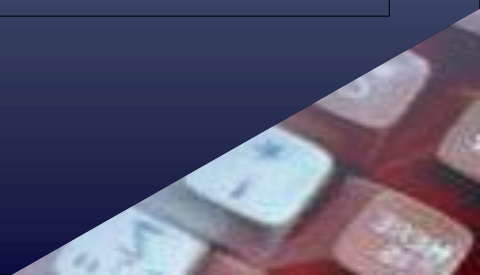
9ec fed[dj	
f k b l e W Fefkf C[dk f ef	
f k b 9e h h][j8W a] hkd	
f k b 9e h h][j<eh][] hkd	
f k b =hW i][j=hW i	=hW
f k b l jhd]][jDW h [
f k b 9edjWd[h][jFW[dj	
f k b : c[di ed][j l p[

Component 클래스에 속하는 중요한 메서드

fk b eeWd i; dWd	
fk b eeWd iLi d	
fk b le h[cel[C[dk9ec fed[dj fefkf	
fk b le h[fWdj	
fk b i[j8Wa] hkd 9eh eh	
fk b i[j; dWd eeWd	
fk b i[j<edj <edj	
fk b i[jBe W'ed dj n" dj o	
fk b i[jl p[dj m" dj	
fk b i[j8ekd i dj n" dj o" dj m" dj	
fk b i[jLi d eeWd	

▪ 2. Container 클래스

f k b <hWc [
f k b <hWc [l jhd] j jh	
f k b l jhd]][j jh	
f k b ee h Wd i H[i pW h	
f k b l e i [jC[dk8W h C[dk8W h c	
f k b l e i [jH[i pW h ee h Wd	
f k b l e i [j jh l jhd] j jh	



<예제> 프레임 객체 생성하기

```
0cfehj WWWhj 1
( Gk b bWi <hWc[ [ij
) 0fk b ijW l e c Wd l jhd] SW]i
*0 <hWc[ 3 d[m <hWc[ <hWc[ :[c e 1
0 i[jl p[ ) "( 1
, 0 i[jLi h jhk[ 1
-0 s
. 0s
```

3. 프레임 창 닫기

S

2 4

0<hWc[[ij (WWS

```

0c f ehj W W W h j 1
( 0c f ehj W W W h j [ l [ dj 1
) 0 <hWc[ ; l [ dj
* 0 W i <hWc[ ; l [ dj [ nj[ d i <hWc[
0 f k b <hWc[ ; l [ dj
, 0 i k f [ h 1 <hWc[
- 0 i [ j l p [ ) "( 1
. 0 i [ j L i W j h k [ 1
/ 0

```

<hWc[

3. 프레임 창 닫기

2 4

0<hw[[ij (WWS

```

0
0 W M d emBi j[ d[ h d[ m M d em7 W j[ h
( 0 S
) 0 f k b l e m d em9 l e i d] M d em; l [ dj [
* 0 i f e i [ 1
0 l o i j[ c [ n j 1 "

```

```

, 0 s m d em9 l e i d]
- 0 s
. 0 1 W M d emBi j[ d[ h
/ 0 s
( 0 s
( 0
(( f k b b W i < hw[ [ij (
) 0 f k b i j W l e c W d l j h d] S W i
( * 0 d[ m < hw[ ; l [ dj 1 < hw[ ; l [ dj
( 0 s
( , 0 s

```

De /

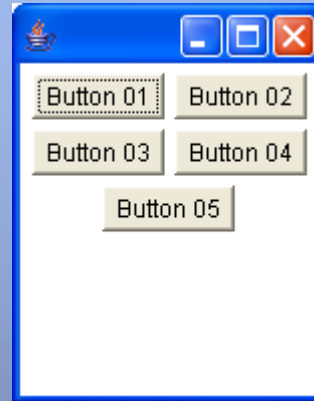
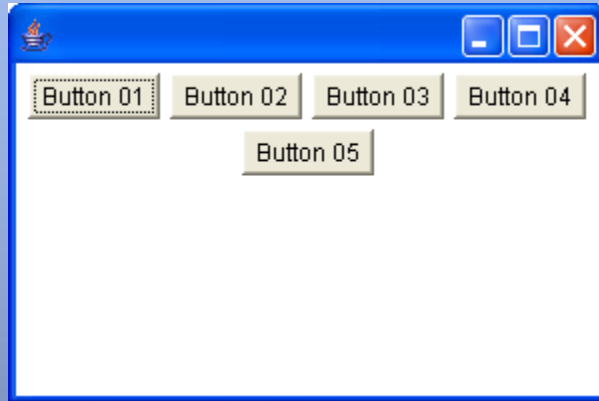


4.1 컨테이너에게 배치관리자 지정하는 절차

~~le~~mBWeekj Weekj 3 d[m ~~le~~mBWeekj 1
~~h~~Wc [3 d[m ~~h~~Wc [1
i [jBWeekj Weekj 1
8kjjed j 3 8kjjed 1
W j 1



4.2 플로우 레이아웃



```

2    4
    0c f ehj W W Wnj 1
    ( 0c f ehj W W Wnj [ l [ dj 1
    ) 0 b W i < h W c [ ; n [ nj [ d i < h W c [
    * 0 f k b < h W c [ ; n
    0
    < l o m B W e k j
    , 0    i [ j B W e k j          < h W c [ ; n
    - 0    i [ j B W e k j d [ m < l o m B W e k j 1
    . 0
  
```

De

<예제>-프레임의 배치관리자로 플로우 레 이아웃 설정하기

```

/0                                     <hw[; n
0
0 W d[ m 8kjjed 8kjjed 1
( 0 W d[ m 8kjjed 8kjjed ( 1
) 0 W d[ m 8kjjed 8kjjed ) 1
* 0 W d[ m 8kjjed 8kjjed * 1
0 W d[ m 8kjjed 8kjjed 1
, 0
- 0 i[ j[ p[ ) "( 1
. 0 i[ j[ i 0 j[k[ 1
/0
( 0 W M d emBi j[ d[ h d[ m M d em7 W j[ h
( 0 f k b l e m d em9 l e i d] M d em; l[ d j [
( ( 0 i f e i [ 1
) 0 l o i j[ c [ n j 1
( * 0 s m d em9 l e i d]
( 0 s
( , 0 1 W M d emBi j[ d[ h
( - 0 s
( . 0 s
( / 0
) f k b l e i <hw[ [ i j )
) 0 f k b i j W l e c W d l j h d] S W i
) ( 0 d[ m <hw[; n 1
) ) 0 s
) * 0 s

```

De (



4.3 보더 레이아웃

2 4

```

0c f ehj W W W h j 1
( 0c f ehj W W W h j [ l [ d j 1
) 0 b W i < h W c [ ; n [ n j [ d i < h W c [
* 0 f k b < h W c [ ; n
0
8eh [ h B W e k j
, 0 i [ j B W e k j d [ m 8eh [ h B W e k j 1
-0
. 0 W d [ m 8kjjed 8kjjed " Deh j 1
/ 0 W d [ m 8kjjed 8kjjed ( " M [ i j 1
0 W d [ m 8kjjed 8kjjed ) " 9 [ d j [ h 1
0 W d [ m 8kjjed 8kjjed * " ; W j 1
( 0 W d [ m 8kjjed 8kjjed " l ekj 1

```

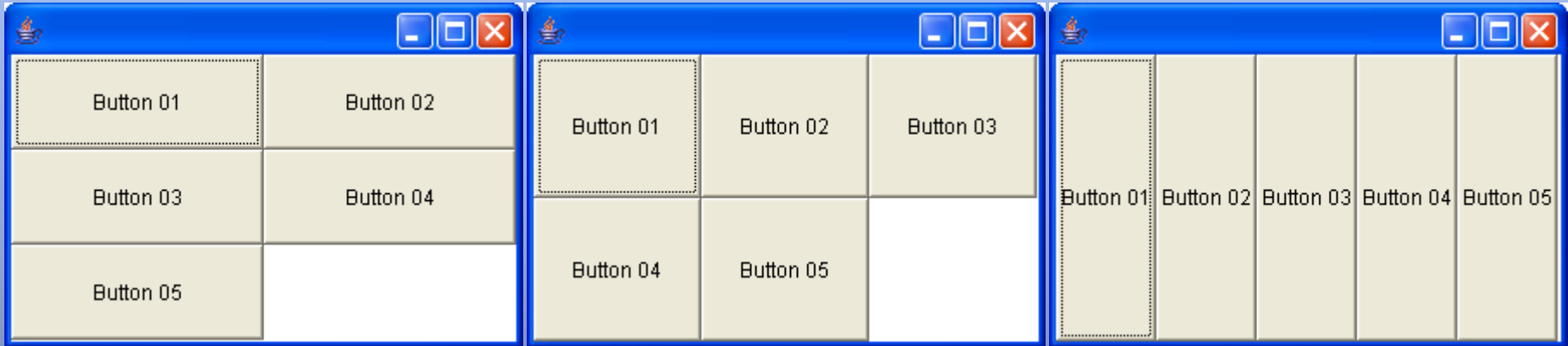
De)



4.3 보더 레이아웃

```
) 0
*0 i[jl p[ ) "( 1
0 i[jLi h jhk[ 1
, 0
-0 W M d emBi j[ d[ h d[ m M d em7 W j[ h
.0 fk b le md em9hei d] M d em;l[ dj[
/0 ifei[ 1
( 0 loij[c[nj 1
( 0 s md em9hei d]
((0 s
)0 1 W M d emBi j[ d[ h
(*0 s
( 0s
(/0
) f k b Wi <hWc[ [ij *
) 0 f k b ijW le c Wd l jhd] SW] i
)(0 d[ m <hWc[ ; n 1
))0 s
De * ) * 0s
```

4.4 그리드 레이아웃



2 4

```

0c f e h j W W W h j 1
( 0c f e h j W W W h j [ l [ d j 1
) 0 b W i < h W c [ ; n [ n j [ d i < h W c [
* 0 f k b < h W c [ ; n
0                                     = h B W e k j
, 0 i [ j B W e k j d [ m = h B W e k j ) " ( 1
- 0 i [ j B W e k j d [ m = h B W e k j ( " ) 1
. 0 i [ j B W e k j d [ m = h B W e k j " 1
/ 0

```

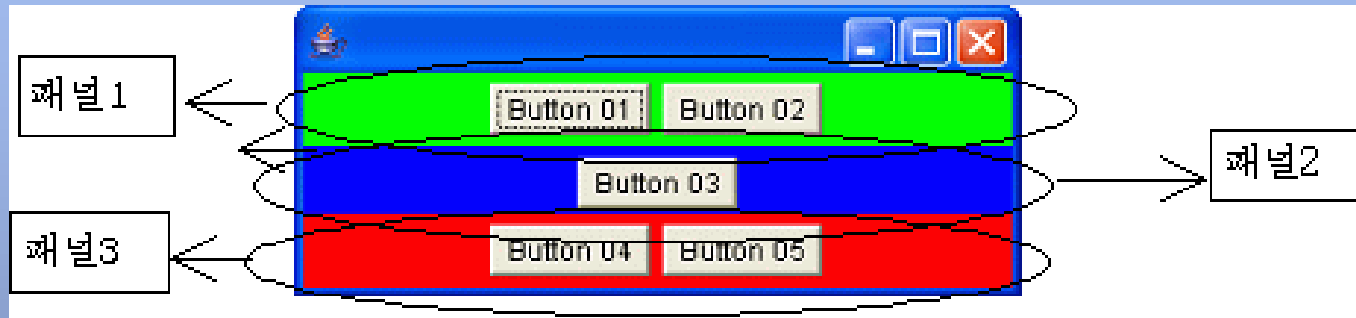
4.4 그리드 레이아웃

```

0
0
0 W d[ m 8kjjed 8kjjed 1
)0 W d[ m 8kjjed 8kjjed ( 1
*0 W d[ m 8kjjed 8kjjed ) 1
0 W d[ m 8kjjed 8kjjed * 1
,0 W d[ m 8kjjed 8kjjed 1
-0
.0 i[ j[ p[ ) "( 1
/0 i[ j[ i[ j[ h[ 1
(
0 W M d emBi j[ d[ h d[ m M d em7 W j[ h
((0 f k b l e m d em9 l e i d] M d em; l[ d j[
)0 i f e i[ 1
(*0 l o i j[ c [ n j 1
(0 s m d em9 l e i d]
(,0 s
(-0 1 W M d emBi j[ d[ h
(.0 s
(/0 s
)0
} f k b W i < h w c[ [ i j
}(0 f k b i j W l e c W d l j h d] S W i
De , )0 d[ m < h w c[ ; n 1
)*0 s
)0 s

```


5. Panel 컨테이너



```

0cfehj WWWhj 1
( 0cfehj WWWhj [l [dj 1
) 0 bWi <hMc [ ; n [nj [ d i <hMc [
*0
0 FWd [ b f Wd " f Wd ( " f Wd ) 1
, 0 f k b <hMc [ ; l [dj ,
-0 (
. 0 f Wd 3 d [ m FWd [ b 1
/ 0 f Wd ( 3 d [ m FWd [ b 1
0 f Wd ) 3 d [ m FWd [ b 1
0
( 0 )
) 0 f Wd i [ j 8 W a ] h e k d 9 e t e h ] h [ d 1
* 0 f Wd ( i [ j 8 W a ] h e k d 9 e t e h h [ 1
0 f Wd ) i [ j 8 W a ] h e k d 9 e t e h [ 1

```

<예제> 패널을 이용하기

```

-0      *      "      "
.0      W      8eh [ hBwdekj DE H >" f Wd 1
/0      W      8eh [ hBwdekj 9; D ; H" f Wd ( 1
(0      W      8eh [ hBwdekj l E >" f Wd ) 1
{0      f Wd W d[ m 8kjjed 8kjjed 1
{0      f Wd W d[ m 8kjjed 8kjjed ( 1
*0      f Wd ( W d[ m 8kjjed 8kjjed ) 1
,0      f Wd ) W d[ m 8kjjed 8kjjed * 1
-0      f Wd ) W d[ m 8kjjed 8kjjed * 1
.0      f Wd ) W d[ m 8kjjed 8kjjed 1
/0      i [ j l p [ ) " ) 1
(0      i [ j l i 0 j k [ 1
)0      W M d emBi j[ d[ h d[ m M d em7 W j[ h
*0      f k b l e m d em9 l e i d] M d em; i [ d j [
00      i f e i [ 1
,0      l o i j[ c [ n j 1
-0      s m d em9 l e i d]
.0      s
/0      1 W M d emBi j[ d[ h
*0      s
*0      s
*(0      s

```

<예제> 패널을 이용하기

```
**0 f k b bWi <hWc[ [ij ,  
* 0 f k b ijW l e c Wd l jhd] SW] i  
*, 0 d[m <hWc[ ; n 1  
*-0 s  
*. 0s
```