

(19) (KR)
(12) (A)

(51) 。 Int. Cl.⁷ (11) 10-2004-0045101
G11B 20/10 (43) 2004 06 01

(21) 10-2002-0073118
(22) 2002 11 22

(71) 416

(72) 104 906

107 707

2 2 203 504

3 1595-2 2 1207

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a) , (; (b)

(a)

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XML 가

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3 (1) , 가 , ,

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4 (1)

4 , 1, 2

XML, HTML

(JAV

A) 1 2

(1) 가 (1)
 API(Application Program Interface)

(1)

API

2가

1

1

- 2

2

가

- 1, 2

5 (1) 가

5 (100), (200),
 TV(300) (400) (400)

(200)

(200)

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(200)

가

TV(300)

TV(300)

(100)가

(200)

가,

(200)

6 (400)

6 (400)

TV(300)

(43)

(47),

(46)

(45),

(48)가

(49)가

(45,46,47,48)

(45,46,47,48)

7 (1)

7 (1) (71), (72), (73)

(74)

(71)

(74) (72) (74) (71) (74) (72) (71) (400) 가 (71) (72) (400) (71) (72) (73) (71) / 8 8 (Name), (Address), (Telephone) 3 1 OK OK 'submit' id = 1 (x,y) = (95, 26) , (cx,cy) = (84, 22)가 (x,y) = (53, 84) , 가 id = 2가 (cx,cy) = (84, 22)가 (x,y) = (83, 84) , id = 4가 , (cx,cy) = (84, 22)가 , OK id = 3 (x,y) = (56, 125) , 가 (cx,cy) = (89, 26) XML

===== <input type="text" value="" id="1" /> ap>

<input type="text" value="" id="2" />

<input type="text" value="" id="3" /> (1)

<input type="button" value="OK" id="4" />

</input>

</input>

</input>

<input type="text" value="" id="1" />

<input type="text" value="" id="2" />

<input type="text" value="" id="3" /> (2)

<input type="button" value="OK" id="4" />

</input>

</inputmap>

=====

```

graph TD
    XML[XML] --> itemlist["<itemlist>"]
    XML --> focusitemlist["<focusitemlist>"]
    itemlist --> 400["(400)"]
    400 --> 1["(1):"]
    400 --> 2["(2):"]
    1 --> id1["id '1'"]
    id1 --> widgets["'TextArea', 'Button', 'TextField', 'List', 'CheckBox'"]
    2 --> id2["id '2'"]
    id2 --> id1_text["id가 '1'"]
  
```

```
import java.applet.*;

public class AnimationApplet extends Applet implements Runnable {

    BUTTON currentOwner;

    Thread animator;

    public void init()

    { // applet

        animator = new Thread(this);

        //          item          .

        new textField(95,39,84,22,1);

        new textField(95,53,84,22,2);

        ...

    }

    public void start()

    { // applet          page

        if (animator.isAive()) {

            animator.resume();

        }

    }

}
```

```

else {

animator.start();

}

}

public void stop()

{ // applet      page

animator.suspend();

}

public void destroy()

{ //

animator.stop();

}

public void run()

{ //      가

String focus_map;

while(true) {

repaint();

Thread.sleep(100); // sleep for some time

check whether focus input is changed?

if it is changed then

{

focus_map = get_new_focusmap(); //      Input map      가      .

sendFocusInputMap(focus_map); // Input map      UI controller

}

}

}

public void paint(Graphics g)

{ /* Applet      */

...draw a focus indication information...

```

...draws other information.

}

String get_new_focusmap()

{ //

// 1

//

String returnmap;

returnmap = '<inputmap>'

+'<inputitemlist>'

+'<inputitem type= \'textfield \' x= \'95 \' y= \'39 \' cx= \'84 \' cy= \'22 \' id= \'1 \' />'

+'<inputitem type= \'textfield \' x= \'95 \' y= \'53 \' cx= \'84 \' cy= \'22 \' id= \'2 \' />'

+'<inputitem type= \'textfield \' x= \'95 \' y= \'83 \' cx= \'84 \' cy= \'22 \' id= \'3 \' />'

+'<inputitem type= \'button \' x= \'56 \' y= \'125 \' cx= \'89 \' cy= \'26 \' id= \'4 \' />'

+'</itemlist>'

+'<focusinputlist>'

+'<focusitem id= \'1 \' down=\'2\'>'

+'<focusitem id= \'2 \' up=\'1\' down=\'3\'>'

+'<focusitem id= \'3 \' up=\'2\' down=\'4\'>'

+'<focusitem id= \'4 \' up=\'3\'>'

+'</focusinputlist>'

+'</inputmap>;'

return returnmap;

}

}

XML DTD(Document Type Definition)

, XML 가

, XML

```
TInputMap im= new InputMap();
```

```
TInputItem it = new TInputItem(TInputItem.TextField,95,26,84,22, - 1,2, - 1, - 1,1); im.add(it);
```

```
TInputItem it = new TInputItem(TInputItem.TextField,95,53,84,22,1,3, - 1, - 1,2); im.add(it);
```

```
TInputItem it = new TInputItem(TInputItem.TextField,95,83,84,22,2,4, - 1, - 1,3); im.add(it);
```

```
TInputItem it = new TInputItem(TInputItem.Button,95,125,89,26,3, - 1, - 1, - 1,4); im.add(it);
```

```
=====
```

API

```
=====
```

```
import java.applet.*;
```

```
public class AnimationApplet extends Applet implements Runnable {
```

```
    BUTTON currentOwner;
```

```
    Thread animator;
```

```
    public void init()
```

```
    { // applet
```

```
        animator = new Thread(this);
```

```
        //
```

```
        new textField(95,39,84,22,1);
```

```
        new textField(95,53,84,22,2);
```

```
        ...
```

```
    }
```

```
    public void start()
```

```
    { // applet        page
```

```
        if (animator.isAive()) {
```

```
            animator.resume();
```

```
        }
```

```
        else {
```

```
            animator.start();
```

```
        }
```

```
    }
```

```

public void stop()

{ // applet      page

  animator.suspend();

}

public void destroy()

{ //

  animator.stop();

}

public void run()

{ //      가

  String focus_map;

  while(true) {

    repaint();

    Thread.sleep(100); // sleep for some time

    check whether focus input is changed?

    if it is changed then

    {

      // API

      //

      //      가      .

      TInputMap im = new InputMap();

      TInputItem it = new TInputItem(TInputItem.TextField,95,26,84,22, - 1,2, - 1, - 1,1);

      im.add(it);

      TInputItem it = new TInputItem(TInputItem.TextField,95,53,84,22,1,3, - 1, - 1,2);

      im.add(it);

      TInputItem it = new TInputItem(TInputItem.TextField,95,83,84,22,2,4, - 1, - 1,3);

      im.add(it);

      TInputItem it = new TInputItem(TInputItem.Button,95,125,89,26,3, - 1, - 1, - 1,4);

      im.add(it);

```

```
sendFocusInputMap(im); // Input map   UI controller
```

```
}
```

```
}
```

```
}
```

```
public void paint(Graphics g)
```

```
{ /*                                     */
```

```
...draw a focus indication information...
```

```
...draws other inoformation.
```

```
}
```

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}
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hadrisauruses
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(type)
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(Anchor) A
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```
id = dom: 1001
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(x,y) = (414, 63)
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가
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```
(cx,cy) = (140, 18)
```

```
Next
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```
'submit'
```

```
id = dom: 1010
```

```
Next
```

```
(x,y
```

```
) = (519, 439)
```

```
, Next
```

```
Next
```

```
가
```

```
(cx,cy)
```

```
= (86, 24)
```

```
(animation applet)
```

```
'object'
```

```
id = dom: 1011
```

```
(x,y) = (34, 51)
```

```
(cx,cy) = (264, 282)
```

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가
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(72)
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(x,y)
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focus change messa
```

ge (x,y) + direction . (71) (accept) (reject) .
 (45) . , 가 가 가
 .

=====

```
import java.applet.*;

public class DemandFocusApplet extends Applet {

    BUTTON currentOwner;

    public void paint(Graphics g)

    { /* Applet */

        ...draw a focus indication information...

        ...draws other inoformation.

    }

    public boolean demandFocusOwner(int x, int y, int dir)

    { /* document Focus owner가 */

        check whether applet can get focus from parent document on dirction 'dir' at position(x,y).

        if applet can get the focus, then return (true);

        eles return (false);

    }

    public boolean gotFocus(int x, int y, int dir)

    { /* document focus */

        set the button to be focused on dirction 'dir' at position(x,y).

    }

    public boolean keyDown(Event e, int key)

    { /* */

        if applet can lose focus because user press a direction key to go out

        of the focused applet, then call focus_change(key)

        else

        user navigates within the object boundary of the applet.
```

```
}

void focus_change(dir)

{ /* focus                               */

// current focus owner is stored in currentOwner

BUTTON nextOwner;

int x, y;

x = getFocusOwnerPosition(1); // current focus position X

y = getFocusOwnerPosition(2); // current focus position Y

nextOwner = findNextFocusOwner(currentOwner,x,y,dir);

if (nextOwner == currentOwner)

{

if (notifyFocus(document,x,y,direction) == focus

accept))

{

loseFocus(currentOwner);

setFocus(document);

}

return;

}

loseFocus(currentOwner);

setFocus(nextOwner);

currentOwner = nextOwner;

}

}
```

=====

12 가

.

12 (a) Mongolia (47) 가 (400)

labeosaurs (b) 가 가

) 가 가 (46) 12 (c

가 , 가 가 .

13 가 .

13 (a) 가 , (49) (1)((47) (74)) 가 .

13 (b) 가 , (46) (1)((45) (74)) 가 .

13 (c) 가 , (46) (1)((47) (74)) 가 가 (1)((45) (74)) .

13 (d) 가 , (45) (1)((74)) 가 가 (1)((47) (74)) .

(57)

1.

(a) ;

(b)

2.

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(a)

XML 가

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(a)

(a1) , ;

(a2) ,
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(b)
가 가 ,
가 가
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(a) ;

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(a) ;

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(b)
(b1) .

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(b)
(b2) .

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XML

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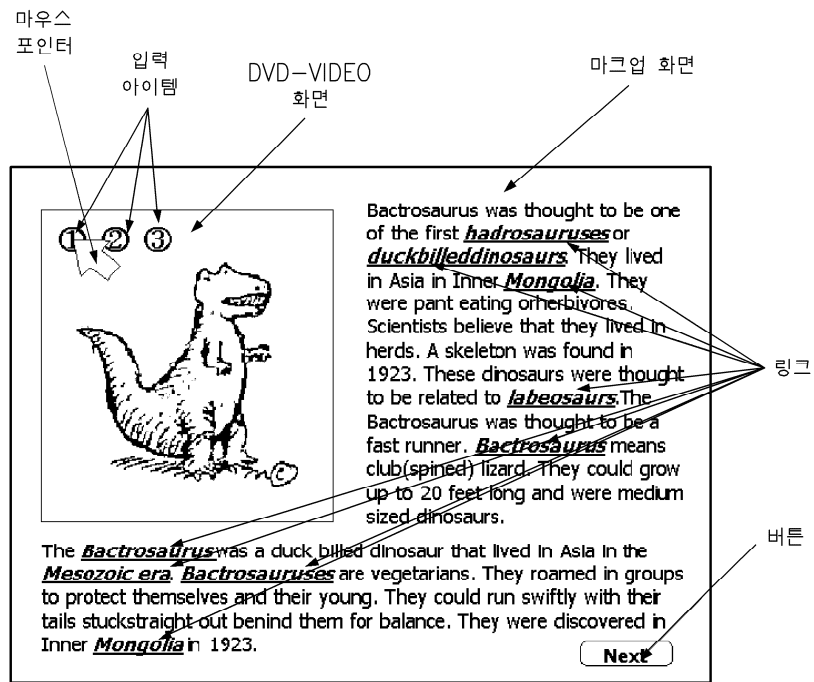
15.

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13 14 ,

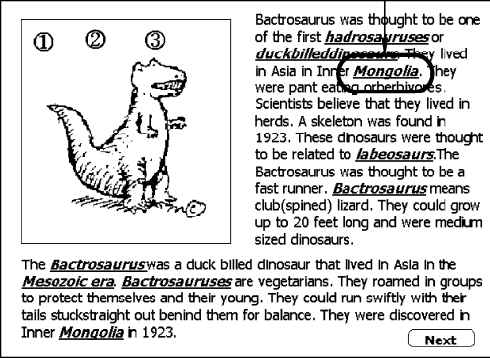
1



2

(a)

포커스



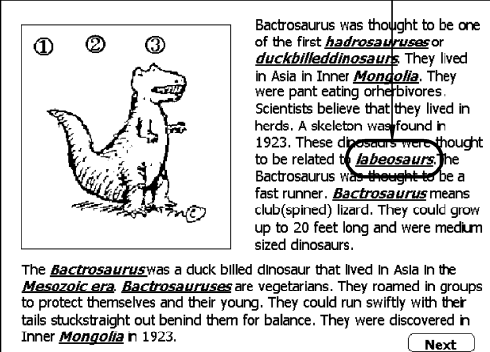
Bactrosaurus was thought to be one of the first hadrosauruses or duckbilled dinosaurs. They lived in Asia in Inner Mongolia. They were plant eating herbivores. Scientists believe that they lived in herds. A skeleton was found in 1923. These dinosaurs were thought to be related to labeosaurs. The Bactrosaurus was thought to be a fast runner. Bactrosaurus means club(spined) lizard. They could grow up to 20 feet long and were medium sized dinosaurs.

The Bactrosaurus was a duck billed dinosaur that lived in Asia in the Mesozoic era. Bactrosauruses are vegetarians. They roamed in groups to protect themselves and their young. They could run swiftly with their tails stuck straight out behind them for balance. They were discovered in Inner Mongolia in 1923.

Next

(b)

포커스



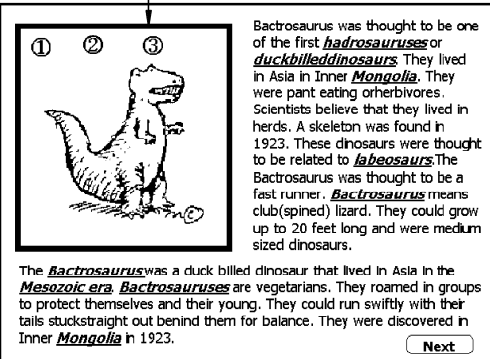
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Next

(c)

포커스

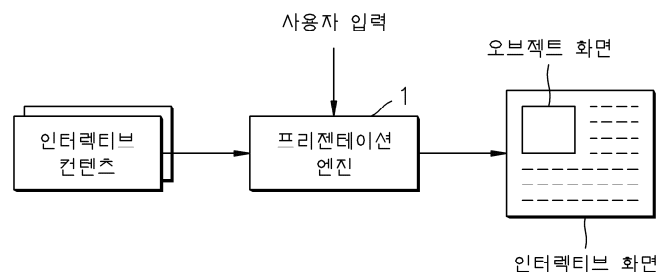


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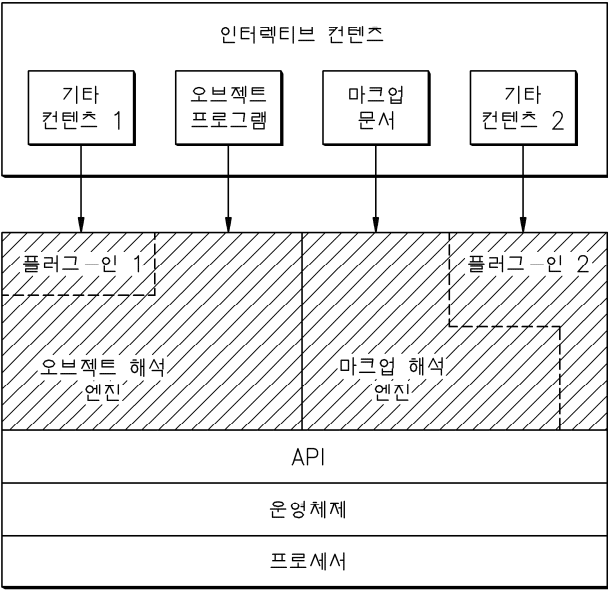
The Bactrosaurus was a duck billed dinosaur that lived in Asia in the Mesozoic era. Bactrosauruses are vegetarians. They roamed in groups to protect themselves and their young. They could run swiftly with their tails stuck straight out behind them for balance. They were discovered in Inner Mongolia in 1923.

Next

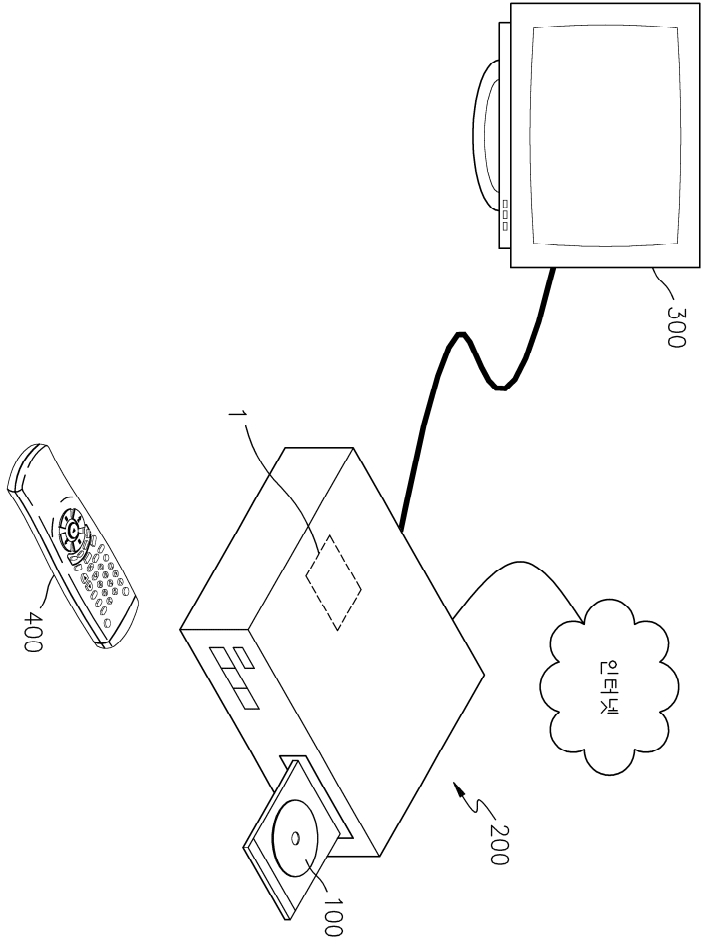
3



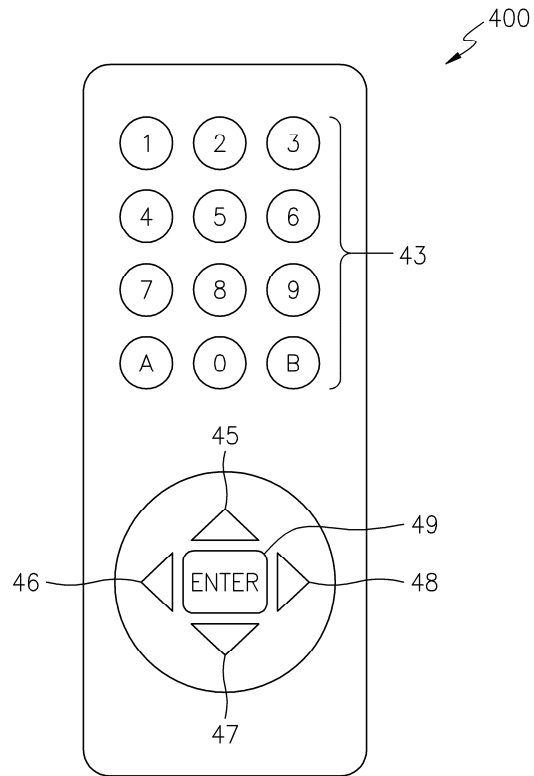
4



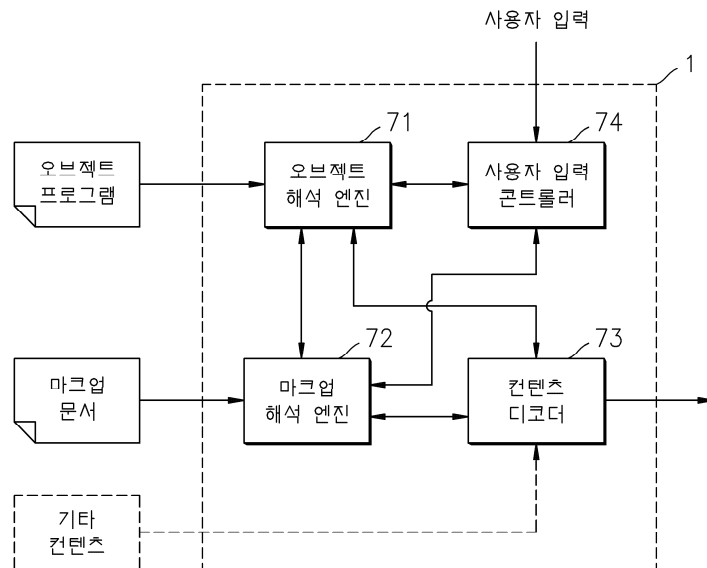
5



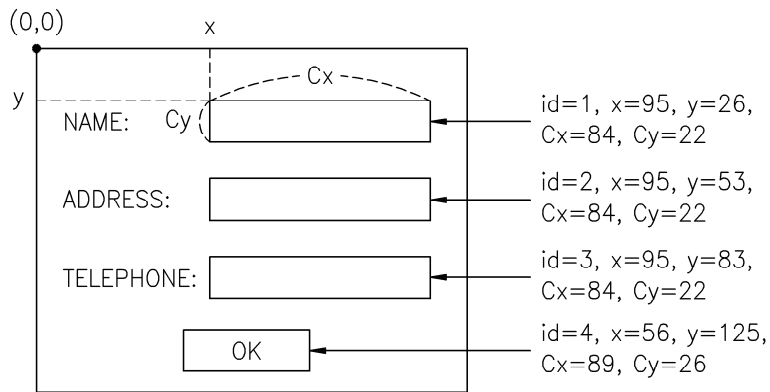
6



7



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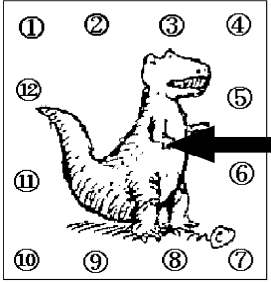


9

입력 아이템	type	x	y	cx	cy	id
hadrosauruses	A	414	63	40		dom:1001
duckbilleddinosaurs	A	328	84	58	18	dom:1002
Mongolia	A	451	107	85	18	dom:1003
labesaurus	A	453	212	11	18	dom:1004
Bactrosaurus	A	452	254	23	18	dom:1005
Bactrosaurus	A	69	347	23	18	dom:1006
Mesozoic era	A	36	372	18	18	dom:1007
Bactrosauruses	A	161	372	41	18	dom:1008
Mongolia	A	81	433	85	18	dom:1009
[Next]	submit	519	439	86	24	dom:1010
애니메이션 애플릿	object	34	5	2	282	dom:1011

10

(a)

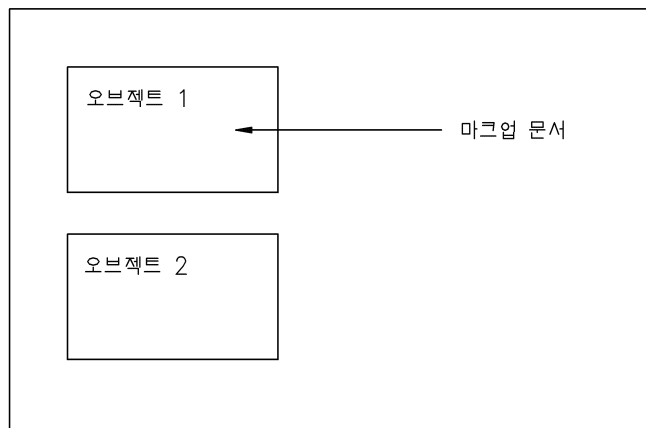


Bactrosaurus was thought to be one of the first *hadrosauruses* or *duckbilled* dinosaurs. They lived in Asia in Inner Mongolia. They were plant eaters. Scientists believe that they lived in herds. A skeleton was found in 1923. These dinosaurs were thought to be related to *Iguanodon*. The Bactrosaurus was thought to be a fast runner. *Bactrosaurus* means club(spined) lizard. They could grow up to 20 feet long and were medium sized dinosaurs.

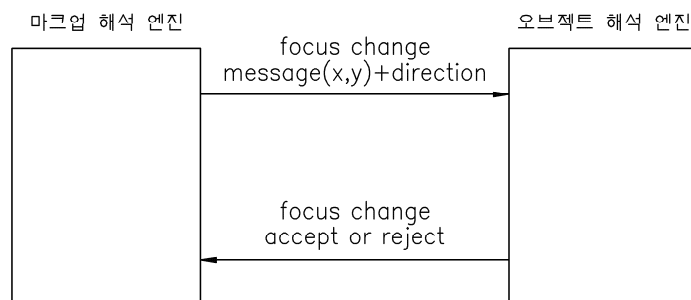
The *Bactrosaurus* was a duck billed dinosaur that lived in Asia in the Mesozoic era. *Bactrosauruses* are vegetarians. They roamed in groups to protect themselves and their young. They could run swiftly with their tails stuck straight out behind them for balance. They were discovered in Inner Mongolia in 1923.

Next

(b)



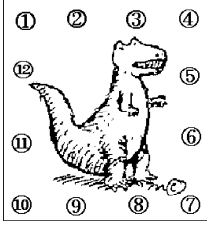
11



12

포커스

(a)

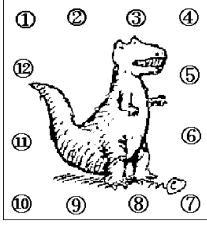


Bactrosaurus was thought to be one of the first hadrosauruses or duckbilled. They lived in Asia in Inner Mongolia. They were plant eaters. Scientists believe that they lived in herds. A skeleton was found in 1923. These dinosaurs were thought to be related to laeosaurus. The Bactrosaurus was thought to be a fast runner. Bactrosaurus means club(spined) lizard. They could grow up to 20 feet long and were medium sized dinosaurs.

The Bactrosaurus was a duck billed dinosaur that lived in Asia in the Mesozoic era. Bactrosauruses are vegetarians. They roamed in groups to protect themselves and their young. They could run swiftly with their tails stuck straight out behind them for balance. They were discovered in Inner Mongolia in 1923.

Next

(b)

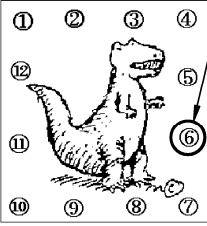


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Next

(c)



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Next

