



Internet Computing

Advanced Multimedia Development (AMMD)



2004



Game – Space Invader

- Game - “Critter Attack” - Space Invader
- Project 2 Prototype Marking Scheme



Game – “Critter Attack”

Player controls the spaceship with arrow keys
Aliens move as large block back and forth
Each Time the aliens get to the edge, they move down
Spaceship fire lasers using space bar
Aliens can fire lasers back
When players shoot an alien, it dies and disappears
When the aliens shoot the player, ship becomes redder
If player dies, game ends
If player kills all the aliens, more faster aliens



Game – “Critter Attack”

P333 to 367

Setup alignment to upper-left corner & scaleMode of .swf file

⇒ Our movie will work no matter what the stage size happened to be.

```
Stage.align="TL" //alignment = upper left
```

```
Stage.scaleMode="noScale"
```

```
//We can change dimension in html
```



Game – “Critter Attack”

Initialize game

- ⇒ Set up everything we need
- ⇒ Aliens, alien bullets and players bullets will be organised using container clips. (empty clips)
- ⇒ Set the depths for everything we need

```
starDepth = 50;  
scoreboardDepth = 75;  
alienBulletsDepth = 98;  
playerBulletDepth = 99;  
shipDepth = 100;  
alienDepth = 101;  
gameoverDepth = 102;  
//readable; easy to update
```



Game – “Critter Attack”

Initialize game

⇒ Set up variables – e.g. speed for ship and aliens

```
originalSpeed = speed = 12;
```

```
originalAlienSpeed = alienSpeed = 1;
```

```
originalFireDelay = fireDelay = 16;
```

```
originalAlienFireDelay = alienFireDelay = 15;
```

```
originalPlayerBulletSpeed = playerBulletSpeed = 20;
```

```
originalAlienBulletSpeed = alienBulletSpeed = 10;
```

```
//readable; easy to update
```



Game – “Critter Attack”

Create Scoreboard

⇒ All objects are attached to stage using similar methods

```
attachMovie("scoreboard", "scoreboard", scoreboard  
    Depth, {_y:Stage.height});  
////loc y of scoreboard = stageheight
```



Game – “Critter Attack”

//Detect Keypress

```
shipDepth = 100; .....
```

```
attachMovie("ship","ship",shipDepth,{_x:Stage.width/2,_  
    y:Stage.height-65,_xscale:18,_yscale:18});
```

```
ship.onKeyDown=shipKeyDown;
```

```
function shipKeyDown()
```

```
{
```

```
    k=Key.getCode(); //get keyboard code when a key  
    is pressed
```

```
    if (k==37)
```

```
    { trace ("left arrow pressed");    }
```

```
    else if (k==39)
```

```
    { trace ("right arrow pressed");    }
```

```
    else if (k==32)
```

```
    { trace ("spacebar pressed, fire ..." + k); }
```

```
}
```

```
ship.onKeyDown=shipKeyDown;
```




Game – “Critter Attack”

//Ship Movement

```
attachMovie("ship","ship",shipDepth,{_x:Stage.width/2,  
    _y:Stage.height-65,_xscale:18,_yscale:18});
```

.....

```
ship.onKeyDown=shipKeyDown; //event hander  
ship.onKeyUp=shipKeyUp;  
ship.onEnterFrame=shipEnterFrame;  
Key.addListener(ship);
```

.....

```
function shipKeyDown()  
{... if (k==Key.LEFT)  
    ship.left = true;
```

.....

```
}
```



Game – “Critter Attack”

//Ship Movement

```
.....  
function shipKeyUp()  
{... if (k==Key.LEFT)  
    ship.left = false;  
.....  
}  
.....  
function shipEnterFrame()  
{ ...  
    if (ship.left && this._x>15+speed ...)  
        this._x -= speed;  
.....  
}
```



Game – “Critter Attack”

```
//Ship Bullet Travel
```

```
.....  
ship.fire = firePlayerBullet;  
.....  
function shipKeyDown()  
{ ...  
  If (k==Key.SPACE)  
  {  ship.firing=true;  
    ship.fire();  }  
} .....  
function shipKeyUp()  
{ ...  
  If (k==Key.SPACE)  
  {  ship.firing=false;  
    ship.fire();  }  
} .....
```



Game – “Critter Attack”

```
//Ship Bullet Travel
```

```
.....  
ship.fire = firePlayerBullet;  
.....  
function shipKeyDown()  
{ ...  
  If (k==Key.SPACE)  
  { ship.firing=true;  
    ship.fire();  }  
} .....  
function shipKeyUp()  
{ ...  
  If (k==Key.SPACE)  
  { ship.firing=false;  
    ship.fire();  }  
} .....
```



Game – “Critter Attack”

```
//Ship Bullet Travel
```

```
.....//skipped steps here
```

```
function firePlayerBullet()
```

```
{
```

```
.....
```

```
var bullet = playerBullets.attachMovie ("bullet", .....);
```

```
bullet._x = ship._x; //put bullet at ship's position
```

```
bullet._y = ship._y;
```

```
bullet.onEnterFrame = playerBulletEnterFrame;
```

```
ship.fireDelay = fireDelay; //reset fireDelay
```

```
ship.fire = null;
```

```
}
```

```
.....
```

```
function playerBulletEnterFrame()
```

```
{
```

```
this._y -= playerBulletSpeed;
```

```
if (this._y < 0) //top of stage
```

```
{ this.removeMovieClip(); }
```

```
}
```



Project 2

Project 2 Prototype Marking Scheme
Project 2 Prototype Template

Internet Computing



Conclusion

Game - "Critter Attack" - Space Invader
Project 2 Prototype Marking Scheme