

CHAPTER V

IMPLEMENTATION AND TESTING

5.1 Implementation

5.1.1 Before simulation Tower of Hanoi in the right way, the initial display will show an empty pole and beberapa button. When the number of disc has been chosen and buttons 'select disc' will take its value for displaying will announce them according to the number that is on a disc.

```
function init(){ //tampilan awal
  if (document.getElementById){
    var diskno = document.hanoi.diskno; //mangambil data html

    diskno.options.selectedIndex = 0;
    drawTowers();
    drawDisks(parseInt(diskno.options[diskno.options.selectedIndex].text));
  }
}

function initVars(){
  for (var i=0;i<disksOnTower1.length;i++){
    disksOnTower1[i]=null;
    disksOnTower2[i]=null;
    disksOnTower3[i]=null;
  }
}

// awal
indexTo = 1;
indexFr = 1;
movectr = 0;
zindex = 0;
```

Figure 5.1.1 Initial appearance

5.1.2 Next step, When the 'solve' is clicked, then the recursive function will be called and will move the disc to the purpose. The disc will move when the function 'move discs' on the run the running disc in conjunction with recursive function.

```

function getMoves(from,to,empty,numDisk){ //rekursif
  if (numDisk > 1)
  {
    getMoves(from, empty, to, numDisk - 1);
    arrFr[idx] = from;
    arrTo[idx++] = to;
    getMoves(empty, to, from, numDisk - 1);
  }
  else {
    arrFr[idx] = from;
    arrTo[idx++] = to;
  }
}

```

Figure 5.1.2 Move disc

5.1.3 When 'solve' the clicked too, canvas that contains text that indicates the function that will run concurrently with the transfer of the disc appears.

```

function tulisan(color1,color2){
  var c = document.getElementById("canvas");
  var ctx = c.getContext("2d");
  var ctx2 = c.getContext("2d");
  ctx.font = "16px Arial";
  ctx.fillStyle = color1;
  ctx.fillText("function drawDisks(disknum);",730,200);
  ctx2.fillStyle = color2;
  ctx2.fillText("function pushDisk(disk,index)",730,230);
}

```

Figure 5.1.3 function that appears

5.2 Testing

5.2.1 Beginning his run this simulation when the button to select a disc in a click. then the button will send the value contents displays the number of the selected disc. On a early there are three fruit pole of empty, buttons select disc that later his user can pick how disc to be played. Information how move that would run, in solve button to start simulation and buttons start again to start again

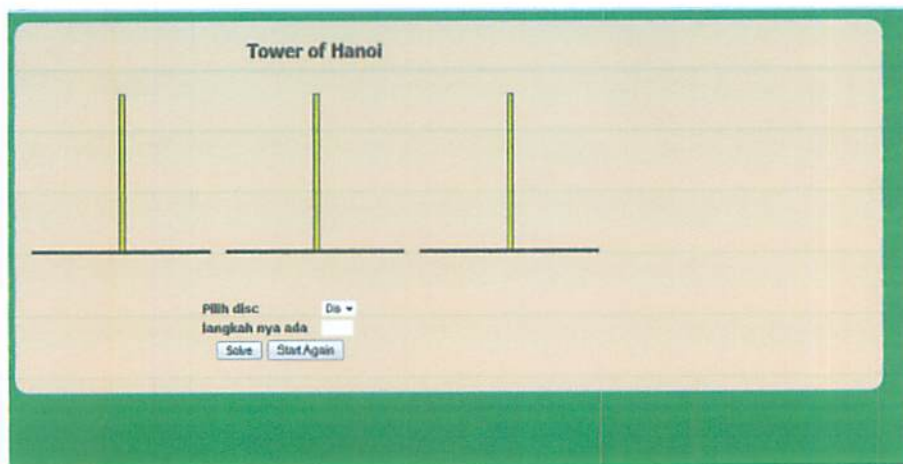


Figure 5.2.1 View early

5.2.2 Select how disc is to be played with clicked the select disc. After clicking disc will appear according to the number is in want, and the information how step the displacement of the disc.

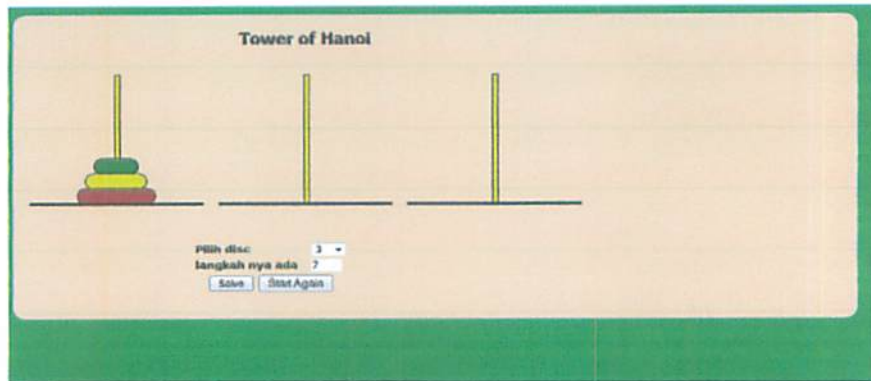


Figure 5.2.2 select 3 disc

5.2.3 Click the button solve to start the simulation . And disc will move toward a pole of purpose. during a simulation there are various information about the function which runs

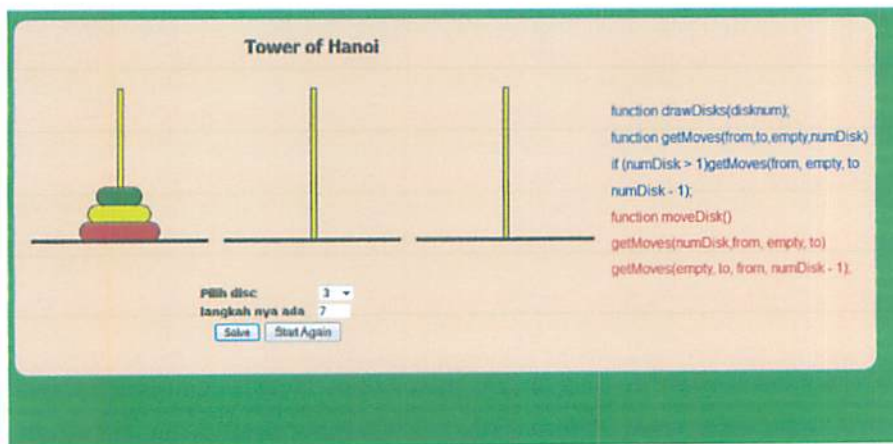


Figure 5.2.3 solve disc

5.2.4 Initial function that runs on the mark with the blue color of the letters. there is written the draw function of the disc, where the disc draw function to display the disc on the screen. and there are also beginning to run a recursive function discs.

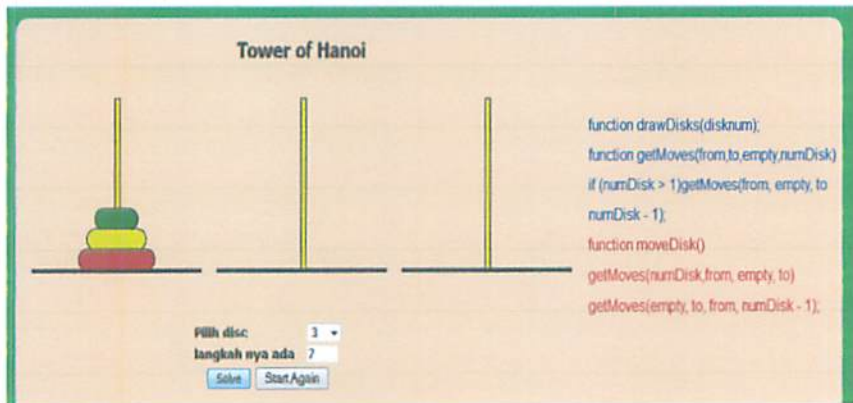


Figure 5.2.4 the function that is running disc

5.2.5 When the displacement of the disc, its information was blue to red as the function that runs the function switch to the next, ie recursive function. appropriate principle, be recursive calls itself, so that the called function will appear and disappear to show its.

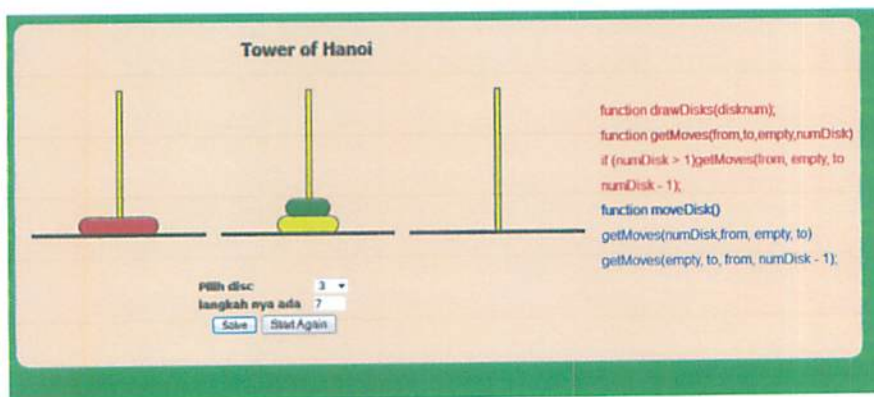


Figure 5.2.5 Recursive function

5.2.6 When all discs from a pole has been moving to pole c then the simulation was completed. to start again from scratch and select the number of different disc press the start button again.automatically display will be back before the beginning of the disc on show.

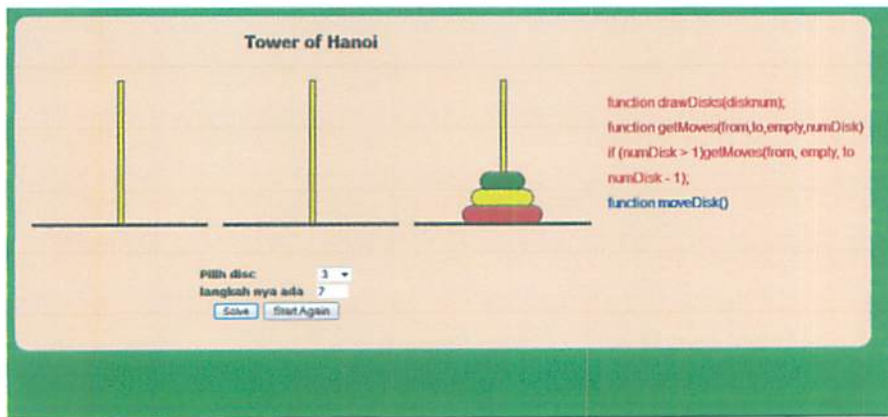


Figure 5.2.6 simulation was completed