UNIVERSITY OF JOHANNESBURG

FACULTY OF SCIENCE

COMPUTER SCIENCE 1A **SAMPLE DESIGN**

Problem Description

Input & Output

Input	
Input Description	*Mechanism*
IntCols	Standard Input
IntRows	Standard Input
intBushesChance	Standard input
intNumTrees	Standard input
numStones	Standard Input
intNumTurns	Standard Input
Output	
Output Description	*Stream (optional)*
The characters/Game	

Data Format

Identifier	*Data Type*	*Description*
intRows	Integer	Stores the value of columns
intCols	Integer	Stores the value of columns
arrNums	Integer	Used as a Pointer
intBushesChance	Integer	Carries the Number of chances that bushes may occur

intNumTrees	Integer	Holds Number of trees to be used
numStones	Integer	Holds Number of stones to be used
intNumTurns	Integer	Holds Number of turns to be used

Pseudo Code

```
TwoDarr arrCraft;
arrCraft = new OneDarr[intRows];

for(int r=0; r<intRows; r++)
{
   arrCraft[r]=new int[intCols];
   for(int c=0; c<intCols; c++)
   {
      arrCraft[r][c]=Empty;
   }
}
int intPRow=intRows/2;
int intPcol=intCols/2;
//Place the player near the centre

arrCraft[intPRow][intPcol]=Player;

//Place Trees

PlaceFeature(arrCraft,intCols,intRows,Trees,int
NumTrees);
  //Place Flint

PlaceFeature(arrCraft,intCols,intRows,Flint,num
Stones);
  //Place Bushes


PlaceBushes(arrCraft,intCols,intRows,intBushes
Chance);
```

```
return arrCraft;
```

UML Activity Diagram