Pseudocode

1 Generall Conditions

function GENERALLCONDITIONS(startRow, startColumn, endRow, endField)
    if $!(0 \leq startRow \leq 8)$ || $!(0 \leq startColumn \leq 8)$ || $!(0 \leq endRow \leq 8)$ || $!(0 \leq endColumn \leq 8)$ **then**
        return false
    end if
    if $isWhite \neq whitesTurn$ **then**
        return false
    end if
    if $startRow == endRow$ && $startColumn == endColumn$ **then**
        return false
    end if
end function

function CHECKENDFIELD(endRow, endColum)
    if $Field[endRow][endColumn].empty == true$ **then**
        return true
    end if
    if $Field[endRow][endColumn].Figure.isWhite == isWhithe$ **then**
        return false
    end if
    return true
end function

2 Pawn

if isWhite **then**
    $stepDir \leftarrow 1$
else
    $stepDir \leftarrow -1$
end if
$rowStep \leftarrow endRow - startRow$
if (Field[endRow][endColumn].empty && $columnDiff == 1$) || (!Field[endRow][endColumn].empty && $columnDiff == 0$) **then**
    return false
end if
if $columnDiff == 0$ && $rowStep == 1 * stepDir$ **then**
    return true
end if
if $columnDiff == 0$ && $rowStep == 2 * stepDir$ && !wasMoved **then**
    if Field[startRow + 1][endRow].empty **then**
        return true
    end if

end if
if $columnDiff == 1$ &&$rowStep == 1*stepDir$ &&$Field[endRow][endColumn].Figure.white \neq$
$this.white$ **then**
    return true
end if
return false

3 Rook

if !$((rowDiff == 0$ && $columnDiff \neq 0)||(rowDiff \neq 0$ && $columnDiff == 0))$
then
    return false
end if
if $rowDiff == 0$ **then**
    $column \leftarrow min(startColumn, endColumn)$
    $maxColumn \leftarrow max(startColumn, endColumn)$
    while $column < maxColumn$ **do**
        if $Field[startRow][column].empty \neq true$ **then**
            return false
        end if
        $column \leftarrow column + 1$
    end while
else
    $row \leftarrow min(startRow, endRow)$
    $maxRow \leftarrow max(startRow, endRow)$
    while $row < maxRow$ **do**
        if $Field[startRow][column].empty \neq true$ **then**
            return false
        end if
        $column \leftarrow column + 1$
    end while
end if
return checkEndField(endRow,endColumn)

4 Knight

if !$((rowDiff == 2$ && $columnDiff == 1)||(rowDiff == 1$ && $columnDiff ==$
$2))$ **then**
    return false
end if
return checkEndField(endRow,endColumn)

5 Bishop

if $rowDiff \neq columnDiff$ **then**

```
        return false
    end if
    if startRow < endRow then
        rowStep ← 1
    else
        rowStep ← −1
    end if
    if startColumn < endColumn then
        columnStep ← 1
    else
        columnStep ← −1
    end if
    row ← startRow
    column ← startColumn
    while row ≠ endRow do
        if Field[row][column].empty ≠ true then
            return false
        end if
        row ← row + rowStep
        column ← column + columnStep
    end while
    return checkEndField(endRow,endColumn)
```

6 Queen

```
    if validBishopMove || validRookMove then
        return true
    end if
    return false
```

7 King

```
    if rowDiff ≤ 1 && columnDiff ≤ 1 then
        return true
    end if
    return checkEndField(endRow,endColumn)
```