

```
' {$STAMP BS2}
' {$PBASIC 2.5}
```

```
'-----Variables-----
'-----
```

```
Water CON 4           'Water Pump Pin
RtHB2 CON 5           '2nd Right H-Bridge Pin
RtHB1 CON 6           '1st Right H-Bridge Pin
LftHB2 CON 7          '2nd Left H-Bridge Pin
LftHB1 CON 8          '1st Left H-Bridge Pin
RtIR1 CON 10          'Right IR LED Pin
LftIR1 CON 12         'Left IR LED Pin
MidIR CON 13          'Middle IR Pin
SdrServo CON 14       'Seeding Servo Pin
DrlServo CON 15       'Drill Servo Pin

RtIR2 VAR Bit         'Right IR Input
LftIR2 VAR Bit        'Left IR Input
Temp VAR Word         'Temporary For...Next Variable
counter VAR Word      'Drill Value Counter
Number VAR Word       'IR Turning Value
HoldBit VAR Bit       'Middle IR Input

counter = 0           'Setting counter to 0
```

```
'-----Forward Movement-----
'-----
```

Forward:

```
LOW RtHB1             'Move Right Wheel Forward
HIGH RtHB2

LOW LftHB1            'Move Left Wheel Forward
HIGH LftHB2

PAUSE 2200            'Time of Forward Movement
```

GOTO MiddleIR

Stopping:

```
LOW RtHB2             'Stop Right Wheel
LOW LftHB2            'Stop Left Wheel

PAUSE 10              'Given Time to Change
```

GOTO Drill

```
'-----Drill Hole-----
'-----
```

Drill:

```
counter=counter+1           'Increase Counter Value
IF counter = 330 THEN Change 'Set Boundry for Counter Value When
Desending
FOR temp = 0 TO 10         'Drill Rotation per Counter
PULSOUT DrlServo,900       'Degree Rotation
PAUSE 10                   'Time to Activate
NEXT
GOTO drill
```

Change:

```
counter = 0                 'Reset Counter
GOTO Up
```

Up:

```
counter=counter+1           'Increase Counter
IF counter = 370 THEN Prepare 'Set Boundry for Counter Value When Rising
FOR temp = 0 TO 10         'Drill Rotation per Counter
PULSOUT DrlServo,200       'Degree Rotation
PAUSE 10                   'Time To Activate
NEXT
GOTO Up
```

```
'-----Prepare to Release Seeds-----
-----
```

Prepare:

```
LOW RthB1                   'Move Right Wheel Forward
HIGH RthB2
LOW LftHB1                   'Move Left Wheel Forward
HIGH LftHB2
PAUSE 1100                   'Time of Forward Movement
```

```

LOW RtHB2           'Stop Right Wheel
LOW LftHB2          'Stop Left Wheel

PAUSE 10

GOTO Seeder        'Given Time to Change

'-----Release Seeds-----
'-----

Seeder:

FOR temp = 0 TO 10   'Opening Speed
PULSOUT SdrServo,900 'Servo Opening Measurement
PAUSE 10             'Time to Activate
NEXT

FOR temp = 0 TO 10   'Closing Speed
PULSOUT SdrServo,750 'Servo Closing Measurement
PAUSE 10             'Time to Activate
NEXT

GOTO WaterPump
'-----Water Seeds-----
'-----

WaterPump:

HIGH Water          'Start Pump
PAUSE 750           'Time Pump is Active
LOW Water           'Stop Pump
PAUSE 100           'Time given to Stop Pump
GOTO Repeat

'-----Repeat-----
'-----

Repeat:

GOTO Forward        'Repeat From Beginning

```


HIGH LftHB2	
PAUSE 2200	'Time to Go Forward
HIGH RthB1	'Turn Right Wheel Backward
LOW RthB2	
LOW LftHB1	'Turn Left Wheel Backward
HIGH LftHB2	
PAUSE 2800	'Time For Turning
GOTO Forward	
Left:	
Number=Number-1	'Decrease Number Value
IF Number=-2 THEN stopper	'Limit Number Value
LOW RthB1	'Turn Right Wheel Forward
HIGH RthB2	
HIGH LftHB1	'Turn Left Wheel Backward
LOW LftHB2	
PAUSE 2800	'Time to Turn
LOW RthB1	'Turn Right Wheel Forward
HIGH RthB2	
LOW LftHB1	'Turn Left Wheel Forward
HIGH LftHB2	
PAUSE 2200	'Time to Go Forward
LOW RthB1	'Turn Right Wheel Forward
HIGH RthB2	
HIGH LftHB1	'Turn Left Wheel Backward
LOW LftHB2	
PAUSE 2800	'Time to Turn
GOTO Forward	
stopper:	
END	'End Program