

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
package com.example.smartfoundry;
import android.os.StrictMode;
import android.util.Log;
import java.sql.Connection;
import java.sql.DriverManager;

public class ConnectionClass {
    public static Connection con;
    public void setConnection()
    {
        try
        {
            StrictMode.ThreadPolicy policy = new
            StrictMode.ThreadPolicy.Builder().permitAll().build();
            StrictMode.setThreadPolicy(policy);
            Class.forName("net.sourceforge.jtds.jdbc.Driver").newInstance();
            con =
            DriverManager.getConnection("jdbc:jtds:sqlserver://masterdatabase.casrma3encfi.
            ap-south-1.rds.amazonaws.com:1433/TestingDataBase","admin","8460144726");
        }
        catch (Exception e)
        {
            Log.e("ASK","Exception " + e.getMessage().toString());
        }
    }
}
```

COPYRIGHT OFFICE
NEW DELHI
Reg. No. - SW-17187/2023
Date 30/08/2023

```
-----

package com.example.smartfoundry;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

import java.sql.ResultSet;
import java.sql.Statement;
```

```
class Login extends AppCompatActivity {
```



20/08/23

```
private Button btn_login;  
private EditText txt_username,txt_password;  
private TextView lbl_download;  
private String downloadLink="https://www.google.co.in/";
```

```
@Override
```

```
protected void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
    setContentView(R.layout.activity_login);
```

```
    btn_login = findViewById(R.id.btn_login);  
    txt_username = findViewById(R.id.txt_username);  
    txt_password = findViewById(R.id.txt_password);  
    lbl_download = findViewById(R.id.lbl_download);
```

COPYRIGHT OFFICE

NEW DELHI

Reg. No. - SW-17187/2023

Date 30/08/2023

```
    if (ConnectionClass.con == null)  
        new ConnectionClass().setConnection();  
    else
```

```
        Toast.makeText(Login.this,"Connection  
Fail",Toast.LENGTH_SHORT).show();  
        versionCheck();
```

```
//Events
```

```
btn_login.setOnClickListener(new View.OnClickListener() {  
    @Override
```

```
    public void onClick(View v) {  
        try {  
            if (ConnectionClass.con != null)  
            {
```

```
                Statement statement =  
ConnectionClass.con.createStatement();  
                String sql = "select * from tb_logins where  
userName='"+txt_username.getText().toString()+"' and  
passWord='"+txt_password.getText().toString()+"'and loginPermission='Yes'";  
                ResultSet resultSet = statement.executeQuery(sql);  
                if(resultSet.next()){  
                    String userName,passWord;  
                    userName = resultSet.getString("userName");  
                    passWord = resultSet.getString("passWord");
```

```
if(txt_username.getText().toString().equals(userName) &&  
txt_password.getText().toString().equals(passWord)){  
    Intent intent = new  
Intent(Login.this,Menu.class);
```

```
    startActivity(intent);
```

```
    }  
    else
```



20/08/23

```
Toast.makeText(Login.this,"Username or Password
Doesn't Match",Toast.LENGTH_SHORT).show();
    }
    else
        Toast.makeText(Login.this,"You Are Not Authorized
User.",Toast.LENGTH_SHORT).show();
    }
    else
        Toast.makeText(Login.this,"Uable to
Connect.",Toast.LENGTH_SHORT).show();
    }catch (Exception ex)
    {
        Toast.makeText(Login.this,ex.getMessage().toString(),Toast.LENGTH_LONG).show();
    }
}
```

COPYRIGHT OFFICE
NEW DELHI
Reg. No. - SW-17187/2023
Date 30/08/2023

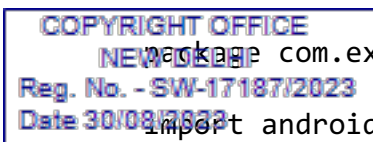
```
lbl_download.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Intent intent = new Intent("android.intent.action.VIEW",
Uri.parse(downloadLink));
        startActivity(intent);
    }
});

private void versionCheck()
{
    try {
        if (ConnectionClass.con != null)
        {
            Statement statement = ConnectionClass.con.createStatement();
            String sql = "select * from tb_appInfo";
            ResultSet resultSet = statement.executeQuery(sql);
            if (resultSet.next())
            {
                int verSion;
                verSion = resultSet.getInt("appVersion");
                if (BuildConfig.VERSION_CODE == verSion)
                    lbl_download.setVisibility(View.GONE);
                else
                {
                    txt_username.setEnabled(false);
                    txt_password.setEnabled(false);
                    btn_login.setEnabled(false);
                    downloadLink = resultSet.getString("appLink");
                }
            }
        }
    }
}
```



20/08/23

```
    }
    } else
        Toast.makeText(Login.this, "Uable to Connect.",
Toast.LENGTH_SHORT).show();
    }
    }catch(Exception ex)
    {
        Toast.makeText(Login.this, ex.getMessage().toString(),
Toast.LENGTH_LONG).show();
    }
}
}
```



```
package com.example.smartfoundry;
import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.LinearLayout;

public class ProcessMonitoring extends AppCompatActivity {

    private LinearLayout btn_verticalCasting;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_process_monitoring);

        btn_verticalCasting = findViewById(R.id.btn_verticalCasting);
        btn_verticalCasting.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new
Intent(ProcessMonitoring.this,VerticalCentrifugalCasting.class);
                startActivity(intent);
            }
        });
    }
}
```



com.example.smartfoundry;

Signature

```
import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.LinearLayout;

public class Menu extends AppCompatActivity {

    private LinearLayout btn_processMonitoring;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_menu);

        btn_processMonitoring = findViewById(R.id.btn_processMonitoring);
        btn_processMonitoring.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(Menu.this, ProcessMonitoring.class);
                startActivity(intent);
            }
        });
    }
}
```

COPYRIGHT OFFICE
NEW DELHI
Reg. No. - SW-17187/2023
Date 30/08/2023

```
-----

package com.example.smartfoundry;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.LinearLayout;

public class VerticalCentrifugalCasting extends AppCompatActivity {

    private LinearLayout
    btn_vccSetup, btn_meltingFurnace, btn_heatingFurnace, btn_environment;

    @Override
```

```
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_vertical_centrifugal_casting);
}
```



Signature

```
btn_vccSetup= findViewById(R.id.btn_vccSetup);
btn_meltingFurnace= findViewById(R.id.btn_meltingFurnace);
btn_heatingFurnace = findViewById(R.id.btn_heatingFurnace);
btn_environment = findViewById(R.id.btn_environment);

//EVENTS
btn_vccSetup.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Intent intent = new
Intent(VerticalCentrifugalCasting.this,VCCSetup.class);
        startActivity(intent);
    }
});

btn_meltingFurnace.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Intent intent = new
Intent(VerticalCentrifugalCasting.this,MeltingFurnace.class);
        startActivity(intent);
    }
});

btn_heatingFurnace.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Intent intent = new
Intent(VerticalCentrifugalCasting.this,HeatingFurnace.class);
        startActivity(intent);
    }
});

btn_environment.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Intent intent = new
Intent(VerticalCentrifugalCasting.this,Environment.class);
        startActivity(intent);
    }
});
}
```



SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
import androidx.appcompat.app.AppCompatActivity;
import androidx.cardview.widget.CardView;
```

```
import android.content.res.ColorStateList;
import android.graphics.Color;
import android.os.Bundle;
import android.os.Handler;
import android.text.BoringLayout;
import android.text.Editable;
import android.text.TextWatcher;
import android.view.KeyEvent;
import android.view.View;
import android.widget.Button;
```

```
import android.widget.EditText;
import android.widget.ImageButton;
import android.widget.TableLayout;
import android.widget.TextView;
import android.widget.Toast;
```

```
import com.android.volley.Request;
import com.android.volley.RequestQueue;
import com.android.volley.Response;
import com.android.volley.VolleyError;
import com.android.volley.toolbox.StringRequest;
import com.android.volley.toolbox.Volley;
import com.github.mikephil.charting.charts.LineChart;
import com.github.mikephil.charting.components.XAxis;
import com.github.mikephil.charting.components.YAxis;
import com.github.mikephil.charting.data.Entry;
import com.github.mikephil.charting.data.LineData;
import com.github.mikephil.charting.data.LineDataSet;
```

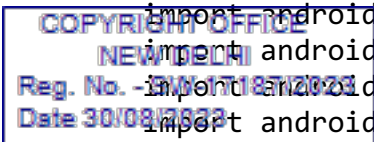
```
import org.json.JSONArray;
import org.json.JSONException;
import org.json.JSONObject;
```

```
import java.text.SimpleDateFormat;
import java.util.ArrayList;
import java.util.Calendar;
import java.util.Date;
import java.util.List;
import java.util.Locale;
import java.util.Random;
```

```
class VCCSetup extends AppCompatActivity {
```

```
    private Button btn_status;
```

20/08/2023



SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
private EditText txt_rpm;
private TextView lbl_setRotation, lbl_powerCousumption, txt_powerCousumption,
btn_fastTurning;
private ImageButton btn_add, btn_sub, btn_clock, btn_antiClock;
private CardView crd_rpm, crd_powerCousumption;
private TableLayout tl_fastTurningValue;

private String RPM="500";
private LineChart grp_rpm, grp_powerCon;
private LineData rpm_lineData, pwr_lineData;
private List<String> rpm_xData = new ArrayList<String>();
private List<Entry> rpm_yData = new ArrayList<>();
private List<String> pwr_xData = new ArrayList<String>();
private List<Entry> pwr_yData = new ArrayList<>();
private Integer rpm_valueCount = 1, pwr_valueCount = 1;

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_vcc_setup);

    crd_rpm = findViewById(R.id.crd_rpm);
    crd_powerCousumption = findViewById(R.id.crd_powerCousumption);
    btn_status = findViewById(R.id.btn_status);
    txt_rpm = findViewById(R.id.txt_rpm);
    btn_add = findViewById(R.id.btn_add);
    btn_sub = findViewById(R.id.btn_sub);
    btn_add = findViewById(R.id.btn_add);
    btn_clock = findViewById(R.id.btn_clock);
    btn_antiClock = findViewById(R.id.btn_antiClock);
    grp_rpm = findViewById(R.id.grp_rpm);
    grp_powerCon = findViewById(R.id.grp_powerCousumption);
    lbl_setRotation = findViewById(R.id.lbl_setRotation);
    txt_powerCousumption = findViewById(R.id.txt_powerCousumption);
    lbl_powerCousumption = findViewById(R.id.lbl_powerCousumption);
    tl_fastTurningValue = findViewById(R.id.tl_fastTurningValue);
    btn_fastTurning = findViewById(R.id.btn_fastTurning);

    lbl_powerCousumption.setVisibility(View.GONE);
    lbl_setRotation.setVisibility(View.GONE);
    tl_fastTurningValue.setVisibility(View.GONE);

    //Checking Machine Information
    CheckMachineInfo();

    //EVENTS PERFORM
    btn_status.setOnClickListener(new View.OnClickListener() {
```

COPYRIGHT OFFICE
NEW DELHI
Reg. No. - SW-17187/2023
Date 30/08/2023



20/08/23

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
@Override
public void onClick(View v) {
    String setRpm = txt_rpm.getText().toString();
    if(btn_status.getText().toString().equals("OFF")){
        SendDataToServer("http://udhyog4.in/Udhyog-40-
Website/smart-foundry/vcc-setup/send-data/send-status?status=1");
        SetMachineStatus("1");
        SetMachineRPM(setRpm);
    }
    else{
        SendDataToServer("http://udhyog4.in/Udhyog-40-
Website/smart-foundry/vcc-setup/send-data/send-status?status=0");
        SetMachineStatus("0");
    }
}
```

COPYRIGHT OFFICE
NEW DELHI
Reg. No. - SW-17187/2023
Date 30/08/2023

```
btn_add.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Integer rpmValue =
Integer.parseInt(txt_rpm.getText().toString()) + 5;
        if(rpmValue <= 999)
        {
            SetMachineRPM(rpmValue.toString());
            txt_rpm.setText(rpmValue.toString());
        }
        else
        {
            txt_rpm.setText("999");
            Toast.makeText(VCCSetup.this,"MAXIMUM RPM IS
999",Toast.LENGTH_LONG).show();
        }
    }
});
```

```
btn_sub.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Integer rpmValue =
Integer.parseInt(txt_rpm.getText().toString()) - 5;
        if(rpmValue >=1)
        {
            SetMachineRPM(rpmValue.toString());
            txt_rpm.setText(rpmValue.toString());
        }
        else
        {

```



20/08/23

```

        txt_rpm.setText("1");
        Toast.makeText(VCCSetup.this, "MINIMUM RPM IS
1", Toast.LENGTH_LONG).show();
    }
}

txt_rpm.addTextChangedListener(new TextWatcher() {
    @Override
    public void beforeTextChanged(CharSequence s, int start, int count,
int after) {

    }

    @Override
    public void onTextChanged(CharSequence s, int start, int before,
int count) {
        if(txt_rpm.getText().length() >=1)

        if(txt_rpm.getText().toString().substring(0,1).contains("0"))

        txt_rpm.setText(txt_rpm.getText().toString().substring(1));
    }

    @Override
    public void afterTextChanged(Editable s) {
        if(txt_rpm.getText().toString().isEmpty())
        {
            btn_add.setEnabled(false);
            btn_sub.setEnabled(false);
        }
        else {
            btn_add.setEnabled(true);
            btn_sub.setEnabled(true);
        }
    }
});

txt_rpm.setOnEditorActionListener(new TextView.OnEditorActionListener()
{
    @Override
    public boolean onEditorAction(TextView v, int actionId, KeyEvent
event) {
        if(!txt_rpm.getText().toString().isEmpty() &&
!txt_rpm.getText().toString().substring(0,1).contains("0") &&
parseInt(txt_rpm.getText().toString()) >= 0)
        {
            SetMachineRPM(txt_rpm.getText().toString());

```



20/08/23

```

        txt_rpm.clearFocus();
    }
    else
        txt_rpm.setText("50");
    return false;
}
});

btn_clock.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        SetMachineRotation("4");
    }
});

btn_antiClock.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        SetMachineRotation("3");
    }
});

btn_fastTurning.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        tl_fastTurningValue.setVisibility(View.VISIBLE);
    }
});

}

private void CheckMachineInfo(){
    GetMachineStatus();
    GetMachineRotation();
    GetMachinePowerConsumption();
}

private void SendDataToServer (String url){
    StringRequest stringRequest = new
    StringRequest(Request.Method.DEPRECATED_GET_OR_POST, url, new
    Response.Listener<String>() {
        @Override
        public void onResponse(String response) {

        }
    }, new Response.ErrorListener() {
        @Override
        public void onErrorResponse(VolleyError error) {

```



20/08/23

```
Toast.makeText(getApplicationContext(),error.getMessage().toString(),Toast.LENGTH_LONG).show();
    }
});
RequestQueue requestQueue =
Volley.newRequestQueue(getApplicationContext());
requestQueue.add(stringRequest);
}
```

```
private void GetMachineStatus() {
    String url = "http://udhyog4.in/Udhyog-40-Website/smart-foundry/vcc-setup/fetch-data/vcc-status.php";
```

```
    StringRequest stringRequest = new
    StringRequest(Request.Method.DEPRECATED_GET_OR_POST, url, new
    Response.Listener<String>() {
```

```
        @Override
        public void onResponse(String response) {
            try {
                JSONArray array = new JSONArray(response);
                for (int i = 0; i < array.length(); i++){
                    JSONObject temprature = array.getJSONObject(i);
```

```
                SetMachineStatus(String.valueOf(temprature.getString("status")));
            }
        }catch (Exception ex)
        {
```

```
Toast.makeText(getApplicationContext(),ex.getMessage().toString(),Toast.LENGTH_LONG).show();
    }
}
```

```
}, new Response.ErrorListener() {
    @Override
    public void onErrorResponse(VolleyError error) {
```

```
Toast.makeText(getApplicationContext(),error.getMessage().toString(),Toast.LENGTH_LONG).show();
    }
```

```
});
Volley.newRequestQueue(getApplicationContext()).add(stringRequest);
}
```

```
private void SetMachineStatus(String setStatus){
    switch (setStatus)
    {
```

```
        case "0":
```



A handwritten signature in blue ink, appearing to read 'Brijesh Barasiya', located at the bottom center of the page.

```
btn_status.setBackgroundTintList(ColorStateList.valueOf(Color.parseColor("#FF0000")));
```

```
        btn_status.setText("OFF");
        lbl_powerCousumption.setVisibility(View.GONE);
        lbl_setRotation.setVisibility(View.GONE);
        crd_rpm.setVisibility(View.GONE);
        crd_powerCousumption.setVisibility(View.GONE);
        //txt_rpm.setText("50");
        break;
    case "1":
```

```
        btn_status.setBackgroundTintList(ColorStateList.valueOf(Color.parseColor("#33BA08")));
```

COPYRIGHT OFFICE
NEW DELHI
Reg. No. - SW-17187/2023
Date 30/08/2023

```
        btn_status.setText("ON");
        lbl_powerCousumption.setVisibility(View.VISIBLE);
        lbl_setRotation.setVisibility(View.VISIBLE);
        crd_rpm.setVisibility(View.VISIBLE);
        crd_powerCousumption.setVisibility(View.VISIBLE);
        SendDataToServer("http://udhyog4.in/Udhyog-40-Website/smart-foundry/vcc-setup/send-data/send-rpm?rpm="+RPM);
        RefreshValue();
        break;
    }
    GetMachineRPM();
}
```

```
private void GetMachineRPM() {
    String url = "http://udhyog4.in/Udhyog-40-Website/smart-foundry/vcc-setup/fetch-data/vcc-rpm.php";
    StringRequest stringRequest = new
    StringRequest(Request.Method.DEPRECATED_GET_OR_POST, url, new
    Response.Listener<String>() {
        @Override
        public void onResponse(String response) {
            try {
                JSONArray array = new JSONArray(response);
                for (int i = 0; i < array.length(); i++){
                    JSONObject temprature = array.getJSONObject(i);

                SetMachineRPM(String.valueOf(temprature.getString("rpm")));
```

```
                Date date = new SimpleDateFormat("yyyy-MM-dd
                HH:mm:ss").parse(String.valueOf(temprature.getString("time")));
```

```
                SimpleDateFormat dateFormat = new
                SimpleDateFormat("HH:mm:ss", Locale.getDefault());
```



20/08/23

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
rpm_xData.add(dateFormat.format(date.getTime()).toString());
    }
    }catch (Exception ex)
    {

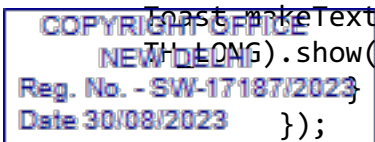
Toast.makeText(getApplicationContext(),ex.getMessage().toString(),Toast.LENGTH_
LONG).show();
    }
    }
    }, new Response.ErrorListener() {
        @Override
        public void onErrorResponse(VolleyError error) {

Toast.makeText(getApplicationContext(),error.getMessage().toString(),Toast.LENG
TH_LONG).show();
        });
    Volley.newRequestQueue(getApplicationContext()).add(stringRequest);
}
private void SetMachineRPM(String setRPM){
    RPM = setRPM;
    if(btn_status.getText().equals("ON"))
    {
        lbl_setRotation.setText(RPM);
        SendDataToServer("http://udhyog4.in/Udhyog-40-Website/smart-
foundry/vcc-setup/send-data/send-rpm?rpm="+RPM);
    }
}

private void GetMachineRotation(){
    String url = "http://udhyog4.in/Udhyog-40-Website/smart-foundry/vcc-
setup/fetch-data/vcc-rotation.php";
    StringRequest stringRequest = new
StringRequest(Request.Method.DEPRECATED_GET_OR_POST, url, new
Response.Listener<String>() {
        @Override
        public void onResponse(String response) {
            try {
                JSONArray array = new JSONArray(response);
                for (int i = 0; i < array.length(); i++){
                    JSONObject temprature = array.getJSONObject(i);

SetMachineRotation(String.valueOf(temprature.getString("rotation")));
                }
            }catch (Exception ex)
            {

```



20/08/23

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
Toast.makeText(getApplicationContext(),ex.getMessage().toString(),Toast.LENGTH_
LONG).show();
    }
}
}, new Response.ErrorListener() {
    @Override
    public void onErrorResponse(VolleyError error) {

Toast.makeText(getApplicationContext(),error.getMessage().toString(),Toast.LENG
TH_LONG).show();
    }
});
Volley.newRequestQueue(getApplicationContext()).add(stringRequest);

private void SetMachineRotation(String setRotation){
    switch (setRotation)
    {
        case "3":

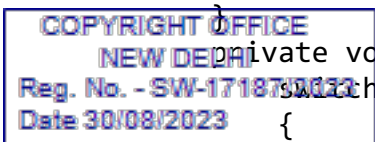
btn_antiClock.setImageTintList(ColorStateList.valueOf(Color.parseColor("#196D3F
"))));

btn_clock.setImageTintList(ColorStateList.valueOf(Color.parseColor("#757575")))
;
            break;
        case "4":

btn_clock.setImageTintList(ColorStateList.valueOf(Color.parseColor("#196D3F")))
;

btn_antiClock.setImageTintList(ColorStateList.valueOf(Color.parseColor("#757575
"))));
            break;
    }
    SendDataToServer("http://udhyog4.in/Udhyog-40-Website/smart-
foundry/vcc-setup/send-data/send-rotation?rotation="+setRotation);
}

private void GetMachinePowerConsumption(){
    String url = "http://udhyog4.in/Udhyog-40-Website/smart-foundry/vcc-
setup/fetch-data/vcc-power-consumption.php";
    StringRequest stringRequest = new
StringRequest(Request.Method.DEPRECATED_GET_OR_POST, url, new
Response.Listener<String>() {
    @Override
    public void onResponse(String response) {
        try {
```



20/08/23

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
JSONArray array = new JSONArray(response);
for (int i = 0; i < array.length(); i++){
    JSONObject temprature = array.getJSONObject(i);

    SetMachinePowerConsumption(String.valueOf(temprature.getString("power_consumpti
on"))));

    Date date = new SimpleDateFormat("yyyy-MM-dd
HH:mm:ss").parse(String.valueOf(temprature.getString("time")));
    SimpleDateFormat dateFormat = new
SimpleDateFormat("HH:mm:ss", Locale.getDefault());

    pwr_xData.add(dateFormat.format(date.getTime()).toString());
    }
} catch (Exception ex)
{
    Toast.makeText(getApplicationContext(),ex.getMessage().toString(),Toast.LENGTH_
LONG).show();
    }
}, new Response.ErrorListener() {
    @Override
    public void onErrorResponse(VolleyError error) {

        Toast.makeText(getApplicationContext(),error.getMessage().toString(),Toast.LENG
TH_LONG).show();
    }
});
Volley.newRequestQueue(getApplicationContext()).add(stringRequest);
}
private void SetMachinePowerConsumption(String setPowerConsumption){
    txt_powerCousumption.setText(setPowerConsumption);
    lbl_powerCousumption.setText(setPowerConsumption);
}

private void RefreshValue() {

    FloatGraph(Integer.parseInt(RPM),grp_rpm,rpm_lineData,rpm_xData,rpm_yData,rpm_v
alueCount);

    FloatGraph(Integer.parseInt(lbl_powerCousumption.getText().toString()),grp_powe
rCon,pwr_lineData,rpm_xData,pwr_yData,pwr_valueCount);

    rpm_valueCount++;
    pwr_valueCount++;
    final Handler handler = new Handler();
```



20/08/23


```
final Runnable runnable = new Runnable() {
    @Override
    public void run() {
        if(btn_status.getText().toString().equals("ON"))
            RefreshValue();
        GetMachineRPM();
        GetMachinePowerConsumption();
    }
};
handler.postDelayed(runnable,10000);
}
```

```
private void FloatGraph(Integer newValue, LineChart graphName, LineData
lineData, List xData, List yData, Integer ValueCount) {
    yData.add(new Entry(ValueCount, newValue));
```

COPYRIGHT OFFICE
NEW DELHI
Reg. No. - SW-17187/2023
Date 30/08/2023

```
    rightYAxis = graphName.getAxisRight();
    rightYAxis.setEnabled(false);
```

```
XAxis xAxis = graphName.getXAxis();
xAxis.setGranularity(1f);
xAxis.setEnabled(true);
xAxis.setPosition(XAxis.XAxisPosition.BOTTOM);
```

```
LineDataSet lineDataSet = new LineDataSet(yData, "RPM");
lineData = new LineData(lineDataSet);
lineDataSet.setMode(LineDataSet.Mode.CUBIC_BEZIER);
lineDataSet.setColors(Color.rgb(0, 0, 0));
lineDataSet.setValueTextSize(12f);
lineDataSet.setLineWidth(3f);
lineDataSet.setDrawCircleHole(true);
lineDataSet.setDrawFilled(true);
lineDataSet.setFill(Color.parseColor("#196F3D"));
lineDataSet.setColor(Color.parseColor("#196F3D"));
```

```
graphName.getXAxis().setValueFormatter(new
com.github.mikephil.charting.formatter.IndexAxisValueFormatter(xData));
graphName.setData(lineData);
graphName.setTouchEnabled(true);
graphName.setDragEnabled(true);
graphName.setPinchZoom(true);
graphName.setVisibleXRangeMaximum(6);
graphName.moveViewToX(ValueCount);
graphName.getDescription().setEnabled(false);
graphName.setDrawGridBackground(false);
graphName.setDrawBorders(true);
graphName.getLegend().setEnabled(false);
graphName.notifyDataSetChanged();
```



20/08/23

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
        graphName.invalidate();
    }

    public void FastTurning(View view){
        TextView textView = (TextView) view;
        SetMachineRPM(textView.getText().toString());
        txt_rpm.setText(textView.getText().toString());
        tl_fastTurningValue.setVisibility(View.GONE);
    }
}
```

```
package com.example.smartfoundry;

import androidx.appcompat.app.AppCompatActivity;
import androidx.cardview.widget.CardView;
```

```
import android.content.res.ColorStateList;
import android.graphics.Color;
import android.os.Bundle;
import android.os.Handler;
import android.textEditable;
import android.text.TextWatcher;
import android.view.KeyEvent;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ImageButton;
import android.widget.TextView;
import android.widget.Toast;
```

```
import com.android.volley.Request;
import com.android.volley.RequestQueue;
import com.android.volley.Response;
import com.android.volley.VolleyError;
import com.android.volley.toolbox.StringRequest;
import com.android.volley.toolbox.Volley;
import com.github.mikephil.charting.charts.LineChart;
import com.github.mikephil.charting.components.XAxis;
import com.github.mikephil.charting.components.YAxis;
import com.github.mikephil.charting.data.Entry;
import com.github.mikephil.charting.data.LineData;
import com.github.mikephil.charting.data.LineDataSet;
```

```
import org.json.JSONArray;
import org.json.JSONObject;
```

20/08/2021



```
import java.text.SimpleDateFormat;
import java.util.ArrayList;
import java.util.Date;
import java.util.List;
import java.util.Locale;
import java.util.Random;

public class MeltingFurnace extends AppCompatActivity {

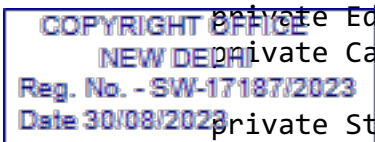
    private TextView
    lbl_temperature, lbl_setTemperature, lbl_powerCousumption, txt_powerCousumption;
    private Button btn_status;
    private ImageButton btn_sub, btn_add;
    private EditText txt_temp;
    private CardView crd_temp, crd_powerCousumption;
    private String TEMP = "50";
    private LineChart grp_temp, grp_powerCon;
    private LineData temp_lineData, pwr_lineData;
    private List<String> temp_xData = new ArrayList<String>();
    private List<Entry> temp_yData = new ArrayList<>();
    private List<String> pwr_xData = new ArrayList<String>();
    private List<Entry> pwr_yData = new ArrayList<>();
    private Integer temp_valueCount = 1, pwr_valueCount = 1;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_melting_furnace);

        crd_temp = findViewById(R.id.crd_temp);
        crd_powerCousumption = findViewById(R.id.crd_powerCousumption);
        lbl_temperature = findViewById(R.id.lbl_temperature);
        lbl_setTemperature = findViewById(R.id.lbl_setTemperature);
        lbl_powerCousumption = findViewById(R.id.lbl_powerCousumption);
        btn_status = findViewById(R.id.btn_status);
        btn_sub = findViewById(R.id.btn_sub);
        btn_add = findViewById(R.id.btn_add);
        txt_temp = findViewById(R.id.txt_temp);
        txt_powerCousumption = findViewById(R.id.txt_powerCousumption);
        grp_temp = findViewById(R.id.grp_temp);
        grp_powerCon = findViewById(R.id.grp_powerCousumption);

        //Checking Machine Information
        CheckMachineInfo();

        //EVENTS PERFORM
```



20/08/23

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
btn_status.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        if(btn_status.getText().toString().equals("OFF")){  
            SendDataToServer("http://udhyog4.in/Udhyog-40-  
Website/smart-foundry/melting-furnace/send-data/send-status.php?status=1");  
            SetMachineStatus("1");  
        }  
        else{  
            SendDataToServer("http://udhyog4.in/Udhyog-40-  
Website/smart-foundry/melting-furnace/send-data/send-status.php?status=0");  
            SetMachineStatus("0");  
        }  
    }  
});
```

COPYRIGHT OFFICE
NEW DELHI
Reg. No. - SW-17187/2023
Date 30/08/2023

```
btn_add.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        Integer rpmValue =  
Integer.parseInt(txt_temp.getText().toString()) + 5;  
        if(rpmValue <= 999)  
        {  
            SetMachineTemp(rpmValue.toString());  
            txt_temp.setText(rpmValue.toString());  
        }  
        else  
        {  
            txt_temp.setText("999");  
            Toast.makeText(MeltingFurnace.this,"MAXIMUM TEMPERATURE IS  
999",Toast.LENGTH_LONG).show();  
        }  
    }  
});
```

```
btn_sub.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        Integer rpmValue =  
Integer.parseInt(txt_temp.getText().toString()) - 5;  
        if(rpmValue >=1)  
            if(rpmValue <= 999)  
            {  
                SetMachineTemp(rpmValue.toString());  
                txt_temp.setText(rpmValue.toString());  
            }  
        else  
        {
```



20/08/23

```

        txt_temp.setText("1");
        Toast.makeText(MeltingFurnace.this,"MINIMUM TEMPERATURE
IS 1",Toast.LENGTH_LONG).show();
    }
}

txt_temp.addTextChangedListener(new TextWatcher() {
    @Override
    public void beforeTextChanged(CharSequence s, int start, int count,
int after) {

    }

    @Override
    public void onTextChanged(CharSequence s, int start, int before,
int count) {
        if(txt_temp.getText().length() >=1)

        if(txt_temp.getText().toString().substring(0,1).contains("0"))

        txt_temp.setText(txt_temp.getText().toString().substring(1));
    }

    @Override
    public void afterTextChanged(Editable s) {
        if(txt_temp.getText().toString().isEmpty())
        {
            btn_add.setEnabled(false);
            btn_sub.setEnabled(false);
        }
        else {
            btn_add.setEnabled(true);
            btn_sub.setEnabled(true);
        }
    }
});

txt_temp.setOnEditorActionListener(new
TextView.OnEditorActionListener() {
    @Override
    public boolean onEditorAction(TextView v, int actionId, KeyEvent
event) {
        if(!txt_temp.getText().toString().isEmpty() &&
!txt_temp.getText().toString().substring(0,1).contains("0") &&
parseInt(txt_temp.getText().toString()) >= 0)
        {
            SetMachineTemp(txt_temp.getText().toString());

```



20/08/23

```

        txt_temp.clearFocus();
    }
    else
        txt_temp.setText("50");
    return false;
}
});

}

private void CheckMachineInfo(){
    GetMachineStatus();
    GetMachineStatus();
    GetMachineTemp();
    GetMachinePowerConsumption();
    SetTempToTextBox();

private void SendDataToServer (String url){
    StringRequest stringRequest = new
StringRequest(Request.Method.DEPRECATED_GET_OR_POST, url, new
Response.Listener<String>() {
    @Override
    public void onResponse(String response) {

    }
}, new Response.ErrorListener() {
    @Override
    public void onErrorResponse(VolleyError error) {

Toast.makeText(getApplicationContext(),error.getMessage().toString(),Toast.LENG
TH_LONG).show();
    }
});
    RequestQueue requestQueue =
Volley.newRequestQueue(getApplicationContext());
    requestQueue.add(stringRequest);
}

private void GetMachineStatus(){
    String url = "http://udhyog4.in/Udhyog-40-Website/smart-
foundry/melting-furnace/Fetch-data/fetch-status.php";
    StringRequest stringRequest = new
StringRequest(Request.Method.DEPRECATED_GET_OR_POST, url, new
Response.Listener<String>() {
    @Override
    public void onResponse(String response) {

```



20/08/23

```

        try {
            JSONArray array = new JSONArray(response);
            for (int i = 0; i < array.length(); i++){
                JSONObject temprature = array.getJSONObject(i);

                SetMachineStatus(String.valueOf(temprature.getString("status")));
            }
        } catch (Exception ex)
        {

            Toast.makeText(getApplicationContext(),ex.getMessage().toString(),Toast.LENGTH_
            LONG).show();
        }
    }

    new Response.ErrorListener() {
        @Override
        public void onErrorResponse(VolleyError error) {

            Toast.makeText(getApplicationContext(),error.getMessage().toString(),Toast.LENG
            TH_LONG).show();
        }
    });

    Volley.newRequestQueue(getApplicationContext()).add(stringRequest);
}

private void SetMachineStatus(String setStatus){
    switch (setStatus)
    {
        case "0":

            btn_status.setBackgroundTintList(ColorStateList.valueOf(Color.parseColor("#FF00
            00")));

            btn_status.setText("OFF");
            lbl_setTemperature.setVisibility(View.GONE);
            lbl_powerCousumption.setVisibility(View.GONE);
            lbl_temperature.setVisibility(View.GONE);
            crd_temp.setVisibility(View.GONE);
            crd_powerCousumption.setVisibility(View.GONE);
            txt_temp.setText("50");
            break;
        case "1":

            btn_status.setBackgroundTintList(ColorStateList.valueOf(Color.parseColor("#33BA
            08")));

            btn_status.setText("ON");
            lbl_setTemperature.setVisibility(View.VISIBLE);
            lbl_powerCousumption.setVisibility(View.VISIBLE);
            lbl_temperature.setVisibility(View.VISIBLE);
            crd_temp.setVisibility(View.VISIBLE);

```



20/08/23

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
        crd_powerConsumption.setVisibility(View.VISIBLE);
        SendDataToServer("http://udhyog4.in/Udhyog-40-Website/smart-
foundry/melting-furnace/send-data/send-temp.php?temp="+TEMP);
        RefreshValue();
        break;
    }
    GetMachineTemp();
}

private void SetTempToTextBox() {
    String url = "http://udhyog4.in/Udhyog-40-Website/smart-
foundry/melting-furnace/Fetch-data/fetch-temp.php";
    StringRequest stringRequest = new
StringRequest(Request.Method.DEPRECATED_GET_OR_POST, url, new
Response.Listener<String>() {
    @Override
    public void onResponse(String response) {
        try {
            JSONArray array = new JSONArray(response);
            for (int i = 0; i < array.length(); i++){
                JSONObject temprature = array.getJSONObject(i);
                TEMP = String.valueOf(temprature.getString("s_temp"));
                txt_temp.setText(TEMP);
                lbl_temperature.setText(TEMP);
                lbl_setTemperature.setText(TEMP);
            }
        } catch (Exception ex)
        {
            Toast.makeText(getApplicationContext(),ex.getMessage().toString(),Toast.LENGTH_
LONG).show();
        }
    }
}, new Response.ErrorListener() {
    @Override
    public void onErrorResponse(VolleyError error) {
        Toast.makeText(getApplicationContext(),error.getMessage().toString(),Toast.LENG
TH_LONG).show();
    }
});
Volley.newRequestQueue(getApplicationContext()).add(stringRequest);
}
private void GetMachineTemp() {
    String url = "http://udhyog4.in/Udhyog-40-Website/smart-
'melting-furnace/Fetch-data/fetch-temp.php";
```



20/08/23

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
StringRequest stringRequest = new
StringRequest(Request.Method.DEPRECATED_GET_OR_POST, url, new
Response.Listener<String>() {
    @Override
    public void onResponse(String response) {
        try {
            JSONArray array = new JSONArray(response);
            for (int i = 0; i < array.length(); i++){
                JSONObject temprature = array.getJSONObject(i);

SetMachineTemp(String.valueOf(temprature.getString("s_temp"))));

                Date date = new SimpleDateFormat("yyyy-MM-dd
HH:mm:ss").parse(String.valueOf(temprature.getString("time")));
                SimpleDateFormat dateFormat = new
SimpleDateFormat("HH:mm:ss", Locale.getDefault());
                temp_xData.add(dateFormat.format(date.getTime()).toString());
            }
        }catch (Exception ex)
        {

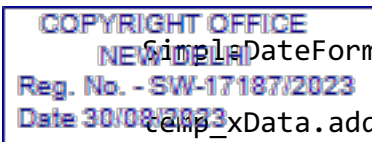
Toast.makeText(getApplicationContext(),ex.getMessage().toString(),Toast.LENGTH_
LONG).show();

        }
    }, new Response.ErrorListener() {
        @Override
        public void onErrorResponse(VolleyError error) {

Toast.makeText(getApplicationContext(),error.getMessage().toString(),Toast.LENG
TH_LONG).show();

        }
    });
Volley.newRequestQueue(getApplicationContext()).add(stringRequest);
}
private void SetMachineTemp(String setTmp){
    TEMP = setTmp;
    lbl_setTemperature.setText(TEMP);
    if(btn_status.getText().equals("ON"))
        SendDataToServer("http://udhyog4.in/Udhyog-40-Website/smart-
foundry/melting-furnace/send-data/send-temp.php?temp="+TEMP);
}

private void GetMachinePowerConsumption(){
    String url = "http://udhyog4.in/Udhyog-40-Website/smart-
melting-furnace/Fetch-data/fetch-pc.php";
```



20/08/23

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
StringRequest stringRequest = new
StringRequest(Request.Method.DEPRECATED_GET_OR_POST, url, new
Response.Listener<String>() {
    @Override
    public void onResponse(String response) {
        try {
            JSONArray array = new JSONArray(response);
            for (int i = 0; i < array.length(); i++){
                JSONObject temprature = array.getJSONObject(i);

                SetMachinePowerConsumption(String.valueOf(temprature.getString("p_c")));

                Date date = new SimpleDateFormat("yyyy-MM-dd
                HH:mm:ss").parse(String.valueOf(temprature.getString("time")));
                SimpleDateFormat dateFormat = new
                SimpleDateFormat("HH:mm:ss", Locale.getDefault());
                pw_xData.add(dateFormat.format(date.getTime()).toString());
            }
        } catch (Exception ex)
        {

        }

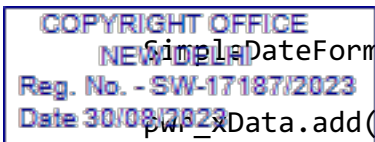
        Toast.makeText(getApplicationContext(),ex.getMessage().toString(),Toast.LENGTH_
        LONG).show();
    }
}, new Response.ErrorListener() {
    @Override
    public void onErrorResponse(VolleyError error) {

        Toast.makeText(getApplicationContext(),error.getMessage().toString(),Toast.LENG
        TH_LONG).show();
    }
});
Volley.newRequestQueue(getApplicationContext()).add(stringRequest);
}
private void SetMachinePowerConsumption(String setPowerConsumption){
    txt_powerCousumption.setText(setPowerConsumption);
    lbl_powerCousumption.setText(setPowerConsumption);
}

private void RefreshValue() {

    FloatGraph(Integer.parseInt(TEMP),grp_temp,temp_lineData,temp_xData,temp_yData,
    temp_valueCount);

    FloatGraph(Integer.parseInt(lbl_powerCousumption.getText().toString()),grp_powe
    _lineData,temp_xData,pwr_yData,pwr_valueCount);
```



Signature

```
temp_valueCount++;
pwr_valueCount++;

final Handler handler = new Handler();
final Runnable runnable = new Runnable() {
    @Override
    public void run() {
        if(btn_status.getText().toString().equals("ON"))
            RefreshValue();
        GetMachineTemp();
        GetMachinePowerConsumption();
        lbl_temperature.setText(TEMP);
    }
}
```

COPYRIGHT OFFICE
NEW DELHI
Reg. No. - SW-17187/2023
Date 30/08/2023

```
handler.postDelayed(runnable, 10000);

private void FloatGraph(Integer newValue, LineChart graphName, LineData
lineData, List xData, List yData, Integer ValueCount) {
    yData.add(new Entry(ValueCount, newValue));
```

```
YAxis rightYAxis = graphName.getAxisRight();
rightYAxis.setEnabled(false);
```

```
XAxis xAxis = graphName.getXAxis();
xAxis.setGranularity(1f);
xAxis.setEnabled(true);
xAxis.setPosition(XAxis.XAxisPosition.BOTTOM);
```

```
LineDataSet lineDataSet = new LineDataSet(yData, "RPM");
lineData = new LineData(lineDataSet);
lineDataSet.setMode(LineDataSet.Mode.CUBIC_BEZIER);
lineDataSet.setColors(Color.rgb(0, 0, 0));
lineDataSet.setValueTextSize(12f);
lineDataSet.setLineWidth(3f);
lineDataSet.setDrawCircleHole(true);
lineDataSet.setDrawFilled(true);
lineDataSet.setFill(Color.parseColor("#196F3D"));
lineDataSet.setColor(Color.parseColor("#196F3D"));
```

```
graphName.getXAxis().setValueFormatter(new
com.github.mikephil.charting.formatter.IndexAxisValueFormatter(xData));
graphName.setData(lineData);
graphName.setTouchEnabled(true);
graphName.setDragEnabled(true);
graphName.setPinchZoom(true);
graphName.setVisibleXRangeMaximum(6);
graphName.moveViewToX(ValueCount);
```



20/08/23

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
graphName.getDescription().setEnabled(false);
graphName.setDrawGridBackground(false);
graphName.setDrawBorders(true);
graphName.getLegend().setEnabled(false);
graphName.notifyDataSetChanged();
graphName.invalidate();
    }
}
```

```
package com.example.smartfoundry;
```

```
import androidx.appcompat.app.AppCompatActivity;
import androidx.cardview.widget.CardView;
```

COPYRIGHT OFFICE

NEW DELHI

Reg. No. - SM/17187/2023

Date 30/08/2023

```
import android.content.res.ColorStateList;
```

```
import android.graphics.Color;
```

```
import android.os.Bundle;
```

```
import android.os.Handler;
```

```
import android.text.Editable;
```

```
import android.text.TextWatcher;
```

```
import android.view.KeyEvent;
```

```
import android.view.View;
```

```
import android.widget.Button;
```

```
import android.widget.EditText;
```

```
import android.widget.ImageButton;
```

```
import android.widget.TextView;
```

```
import android.widget.Toast;
```

```
import com.android.volley.Request;
```

```
import com.android.volley.RequestQueue;
```

```
import com.android.volley.Response;
```

```
import com.android.volley.VolleyError;
```

```
import com.android.volley.toolbox.RequestFuture;
```

```
import com.android.volley.toolbox.StringRequest;
```

```
import com.android.volley.toolbox.Volley;
```

```
import com.github.mikephil.charting.charts.LineChart;
```

```
import com.github.mikephil.charting.components.XAxis;
```

```
import com.github.mikephil.charting.components.YAxis;
```

```
import com.github.mikephil.charting.data.Entry;
```

```
import com.github.mikephil.charting.data.LineData;
```

```
import com.github.mikephil.charting.data.LineDataSet;
```

```
import org.json.JSONArray;
```

```
import org.json.JSONObject;
```

```
java.text.SimpleDateFormat;
```



Signature

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
import java.util.ArrayList;
import java.util.Date;
import java.util.List;
import java.util.Locale;
import java.util.Random;
import java.util.concurrent.ExecutionException;

public class HeatingFurnace extends AppCompatActivity {

    private TextView
    lbl_temperature, lbl_setTemperature, lbl_powerCousumption, txt_powerCousumption;
    private Button btn_status;
    private ImageButton btn_sub, btn_add;
    private EditText txt_temp;
    private CardView crd_temp, crd_powerCousumption;

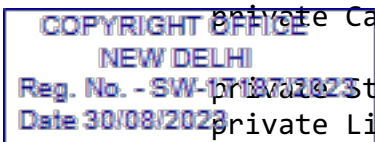
    private String TEMP = "50";
    private LineChart grp_temp, grp_powerCon;
    private LineData temp_lineData, pwr_lineData;
    private List<String> temp_xData = new ArrayList<String>();
    private List<Entry> temp_yData = new ArrayList<>();
    private List<String> pwr_xData = new ArrayList<String>();
    private List<Entry> pwr_yData = new ArrayList<>();
    private Integer temp_valueCount = 1, pwr_valueCount = 1;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_heating_furnace);

        crd_temp = findViewById(R.id.crd_temp);
        crd_powerCousumption = findViewById(R.id.crd_powerCousumption);
        lbl_temperature = findViewById(R.id.lbl_temperature);
        lbl_setTemperature = findViewById(R.id.lbl_setTemperature);
        lbl_powerCousumption = findViewById(R.id.lbl_powerCousumption);
        btn_status = findViewById(R.id.btn_status);
        btn_sub = findViewById(R.id.btn_sub);
        btn_add = findViewById(R.id.btn_add);
        txt_temp = findViewById(R.id.txt_temp);
        txt_powerCousumption = findViewById(R.id.txt_powerCousumption);
        grp_temp = findViewById(R.id.grp_temp);
        grp_powerCon = findViewById(R.id.grp_powerCousumption);

        //Checking Machine Information
        CheckMachineInfo();

        //EVENTS PERFORM
        btn_status.setOnClickListener(new View.OnClickListener() {
```



20/08/23

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
@Override
public void onClick(View v) {
    if(btn_status.getText().toString().equals("OFF")){
        SendDataToServer("http://udhyog4.in/Udhyog-40-
Website/smart-foundry/heating-furnace/send-data/send-status.php?status=1");
        SetMachineStatus("1");
    }
    else{
        SendDataToServer("http://udhyog4.in/Udhyog-40-
Website/smart-foundry/heating-furnace/send-data/send-status.php?status=0");
        SetMachineStatus("0");
    }
}
});
```

COPYRIGHT OFFICE
NEW DELHI
Reg. No. - SW-17187/2023
Date 30/08/2023

```
btn_add.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
    Integer rpmValue =
Integer.parseInt(txt_temp.getText().toString()) + 5;
    if(rpmValue <= 999)
    {
        SetMachineTemp(rpmValue.toString());
        txt_temp.setText(rpmValue.toString());
    }
    else
    {
        txt_temp.setText("999");
        Toast.makeText(HeatingFurnace.this,"MAXIMUM TEMPERATURE IS
999",Toast.LENGTH_LONG).show();
    }
}
});
```

```
btn_sub.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
    Integer rpmValue =
Integer.parseInt(txt_temp.getText().toString()) - 5;
    if(rpmValue >=1)
        if(rpmValue <= 999)
        {
            SetMachineTemp(rpmValue.toString());
            txt_temp.setText(rpmValue.toString());
        }
    else
    {
        txt_temp.setText("1");
    }
}
```



20/08/23

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
Toast.makeText(HeatingFurnace.this,"MINIMUM TEMPERATURE IS
1",Toast.LENGTH_LONG).show();
    }
    });

    txt_temp.addTextChangedListener(new TextWatcher() {
        @Override
        public void beforeTextChanged(CharSequence s, int start, int count,
int after) {

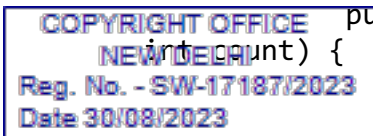
        }

        @Override
        public void onTextChanged(CharSequence s, int start, int before,
int count) {
            if(txt_temp.getText().length() >=1)
            if(txt_temp.getText().toString().substring(0,1).contains("0"))

            txt_temp.setText(txt_temp.getText().toString().substring(1));
        }

        @Override
        public void afterTextChanged(Editable s) {
            if(txt_temp.getText().toString().isEmpty())
            {
                btn_add.setEnabled(false);
                btn_sub.setEnabled(false);
            }
            else {
                btn_add.setEnabled(true);
                btn_sub.setEnabled(true);
            }
        }
    });

    txt_temp.setOnEditorActionListener(new
TextView.OnEditorActionListener() {
        @Override
        public boolean onEditorAction(TextView v, int actionId, KeyEvent
event) {
            if(!txt_temp.getText().toString().isEmpty() &&
!txt_temp.getText().toString().substring(0,1).contains("0") &&
Integer.parseInt(txt_temp.getText().toString()) >= 0)
            {
                SetMachineTemp(txt_temp.getText().toString());
                txt_temp.clearFocus();
            }
        }
    });
```



20/08/23

```

    }
    else
        txt_temp.setText("50");
    return false;
}
});
}

private void CheckMachineInfo(){
    GetMachineStatus();
    GetMachineTemp();
    GetMachineTemp();
    GetMachinePowerConsumption();
    SetTempToTextBox();
}

private void SendDataToServer (String url){
    StringRequest stringRequest = new
    StringRequest(Request.Method.DEPRECATED_GET_OR_POST, url, new
    Response.Listener<String>() {
        @Override
        public void onResponse(String response) {

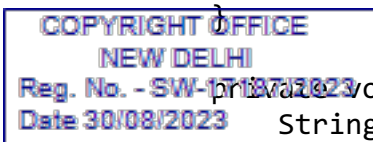
        }
    }, new Response.ErrorListener() {
        @Override
        public void onErrorResponse(VolleyError error) {

        }
    });
    Toast.makeText(getApplicationContext(),error.getMessage().toString(),Toast.LENGTH_LONG).show();
}

RequestQueue requestQueue =
Volley.newRequestQueue(getApplicationContext());
requestQueue.add(stringRequest);
}

private void GetMachineStatus(){
    String url = "http://udhyog4.in/Udhyog-40-Website/smart-
foundry/heating-furnace/Fetch-data/fetch-status.php";
    StringRequest stringRequest = new
    StringRequest(Request.Method.DEPRECATED_GET_OR_POST, url, new
    Response.Listener<String>() {
        @Override
        public void onResponse(String response) {
            try {
                JSONArray array = new JSONArray(response);
                for (int i = 0; i < array.length(); i++){

```



20/08/23


```

JSONObject temprature = array.getJSONObject(i);

SetMachineStatus(String.valueOf(temprature.getString("status")));
    }
    }catch (Exception ex)
    {

Toast.makeText(getApplicationContext(),ex.getMessage().toString(),Toast.LENGTH_
LONG).show();
    }
    }
    }, new Response.ErrorListener() {
        @Override
        public void onErrorResponse(VolleyError error) {
            Toast.makeText(getApplicationContext(),error.getMessage().toString(),Toast.LENG
            TH_LONG).show();
        }
    });
Volley.newRequestQueue(getApplicationContext()).add(stringRequest);
}
private void SetMachineStatus(String setStatus){
    switch (setStatus)
    {
        case "0":

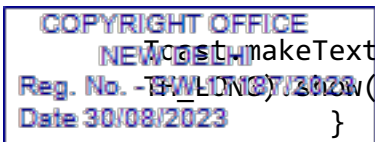
btn_status.setBackgroundTintList(ColorStateList.valueOf(Color.parseColor("#FF00
00")));

        btn_status.setText("OFF");
        lbl_setTemperature.setVisibility(View.GONE);
        lbl_powerCousumption.setVisibility(View.GONE);
        lbl_temperature.setVisibility(View.GONE);
        crd_temp.setVisibility(View.GONE);
        crd_powerCousumption.setVisibility(View.GONE);
        txt_temp.setText("50");
        break;
        case "1":

btn_status.setBackgroundTintList(ColorStateList.valueOf(Color.parseColor("#33BA
08")));

        btn_status.setText("ON");
        lbl_setTemperature.setVisibility(View.VISIBLE);
        lbl_powerCousumption.setVisibility(View.VISIBLE);
        lbl_temperature.setVisibility(View.VISIBLE);
        crd_temp.setVisibility(View.VISIBLE);
        crd_powerCousumption.setVisibility(View.VISIBLE);
        SendDataToServer("http://udhyog4.in/Udhyog-40-Website/smart-
        heating-furnace/send-data/send-temp.php?temp=" + TEMP);
    }
}

```



20/08/23

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
        RefreshValue();
        break;
    }
    GetMachineTemp();
}

private void SetTempToTextBox() {
    String url = "http://udhyog4.in/Udhyog-40-Website/smart-
foundry/heating-furnace/Fetch-data/fetch-temp.php";
    StringRequest stringRequest = new
StringRequest(Request.Method.DEPRECATED_GET_OR_POST, url, new
Response.Listener<String>() {
        @Override
        public void onResponse(String response) {
            try {
                JSONArray array = new JSONArray(response);
                for (int i = 0; i < array.length(); i++){
                    JSONObject temprature = array.getJSONObject(i);
                    TEMP = String.valueOf(temprature.getString("s_temp"));
                    txt_temp.setText(TEMP);
                    lbl_temperature.setText(TEMP);
                    lbl_setTemperature.setText(TEMP);
                }
            }catch (Exception ex)
            {

                Toast.makeText(getApplicationContext(),ex.getMessage().toString(),Toast.LENGTH_
LONG).show();
            }
        }
    }, new Response.ErrorListener() {
        @Override
        public void onErrorResponse(VolleyError error) {

            Toast.makeText(getApplicationContext(),error.getMessage().toString(),Toast.LENG
TH_LONG).show();
        }
    });
    Volley.newRequestQueue(getApplicationContext()).add(stringRequest);
}

private void GetMachineTemp() {
    String url = "http://udhyog4.in/Udhyog-40-Website/smart-
foundry/heating-furnace/Fetch-data/fetch-temp.php";
    StringRequest stringRequest = new
StringRequest(Request.Method.DEPRECATED_GET_OR_POST, url, new
Response.Listener<String>() {
        @Override
        public void onResponse(String response) {
```



20/08/23

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
try {
    JSONArray array = new JSONArray(response);
    for (int i = 0; i < array.length(); i++){
        JSONObject temprature = array.getJSONObject(i);

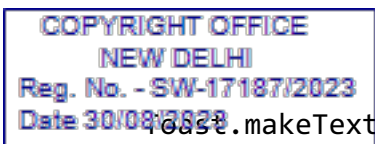
SetMachineTemp(String.valueOf(temprature.getString("s_temp"))));

        Date date = new SimpleDateFormat("yyyy-MM-dd
HH:mm:ss").parse(String.valueOf(temprature.getString("time")));
        SimpleDateFormat dateFormat = new
SimpleDateFormat("HH:mm:ss", Locale.getDefault());

temp_xData.add(dateFormat.format(date.getTime()).toString());
    }
} catch (Exception ex)
{
    Toast.makeText(getApplicationContext(),ex.getMessage().toString(),Toast.LENGTH_
LONG).show();
}
}, new Response.ErrorListener() {
    @Override
    public void onErrorResponse(VolleyError error) {

Toast.makeText(getApplicationContext(),error.getMessage().toString(),Toast.LENG
TH_LONG).show();
    }
});
Volley.newRequestQueue(getApplicationContext()).add(stringRequest);
}
private void SetMachineTemp(String setTmp){
    TEMP = setTmp;
    lbl_setTemperature.setText(TEMP);
    if(btn_status.getText().equals("ON"))
        SendDataToServer("http://udhyog4.in/Udhyog-40-Website/smart-
foundry/heating-furnace/send-data/send-temp.php?temp="+TEMP);
}

private void GetMachinePowerConsumption(){
    String url = "http://udhyog4.in/Udhyog-40-Website/smart-
foundry/heating-furnace/Fetch-data/fetch-pc.php";
    StringRequest stringRequest = new
StringRequest(Request.Method.DEPRECATED_GET_OR_POST, url, new
Response.Listener<String>() {
        @Override
        public void onResponse(String response) {
            try {
```



20/08/23

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
JSONArray array = new JSONArray(response);
for (int i = 0; i < array.length(); i++){
    JSONObject temprature = array.getJSONObject(i);

    SetMachinePowerConsumption(String.valueOf(temprature.getString("p_c")));

    Date date = new SimpleDateFormat("yyyy-MM-dd
HH:mm:ss").parse(String.valueOf(temprature.getString("time")));
    SimpleDateFormat dateFormat = new
SimpleDateFormat("HH:mm:ss", Locale.getDefault());

    pwr_xData.add(dateFormat.format(date.getTime()).toString());
    }
} catch (Exception ex)
{
    Toast.makeText(getApplicationContext(),ex.getMessage().toString(),Toast.LENGTH_
LONG).show();
}
}, new Response.ErrorListener() {
    @Override
    public void onErrorResponse(VolleyError error) {

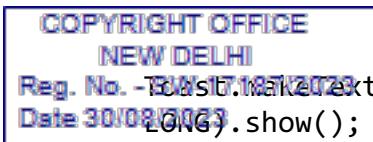
        Toast.makeText(getApplicationContext(),error.getMessage().toString(),Toast.LENG
TH_LONG).show();
    }
});
Volley.newRequestQueue(getApplicationContext()).add(stringRequest);
}
private void SetMachinePowerConsumption(String setPowerConsumption){
    txt_powerCousumption.setText(setPowerConsumption);
    lbl_powerCousumption.setText(setPowerConsumption);
}

private void RefreshValue() {

    FloatGraph(Integer.parseInt(TEMP),grp_temp,temp_lineData,temp_xData,temp_yData,
temp_valueCount);

    FloatGraph(Integer.parseInt(lbl_powerCousumption.getText().toString()),grp_powe
rCon,pwr_lineData,temp_xData,pwr_yData,pwr_valueCount);

    temp_valueCount++;
    pwr_valueCount++;
```



```
final Handler handler = new Handler();
final Runnable runnable = new Runnable() {
```

20/08/23

```

@Override
public void run() {
    if(btn_status.getText().toString().equals("ON"))
        RefreshValue();
    GetMachineTemp();
    GetMachinePowerConsumption();
    lbl_temperature.setText(TEMP);
}
};
handler.postDelayed(runnable,10000);
}
private void FloatGraph(Integer newValue, LineChart graphName, LineData
lineData, List xData, List yData, Integer ValueCount) {
    yData.add(new Entry(ValueCount, newValue));

    YAxis rightYAxis = graphName.getAxisRight();
    rightYAxis.setEnabled(false);

    XAxis xAxis = graphName.getXAxis();
    xAxis.setGranularity(1f);
    xAxis.setEnabled(true);
    xAxis.setPosition(XAxis.XAxisPosition.BOTTOM);

    LineDataSet lineDataSet = new LineDataSet(yData, "RPM");
    lineData = new LineData(lineDataSet);
    lineDataSet.setMode(LineDataSet.Mode.CUBIC_BEZIER);
    lineDataSet.setColors(Color.rgb(0, 0, 0));
    lineDataSet.setValueTextSize(12f);
    lineDataSet.setLineWidth(3f);
    lineDataSet.setDrawCircleHole(true);
    lineDataSet.setDrawFilled(true);
    lineDataSet.setFillColor(Color.parseColor("#196F3D"));
    lineDataSet.setColor(Color.parseColor("#196F3D"));

    graphName.getXAxis().setValueFormatter(new
com.github.mikephil.charting.formatter.IndexAxisValueFormatter(xData));
    graphName.setData(lineData);
    graphName.setTouchEnabled(true);
    graphName.setDragEnabled(true);
    graphName.setPinchZoom(true);
    graphName.setVisibleXRangeMaximum(6);
    graphName.moveViewToX(ValueCount);
    graphName.getDescription().setEnabled(false);
    graphName.setDrawGridBackground(false);
    graphName.setDrawBorders(true);
    graphName.getLegend().setEnabled(false);
    graphName.notifyDataSetChanged();
    graphName.invalidate();

```



20/08/23

```
}  
}
```

```
package com.example.smartfoundry;
```

```
import androidx.appcompat.app.AppCompatActivity;  
import androidx.cardview.widget.CardView;
```

```
import android.content.Intent;  
import android.os.Bundle;  
import android.os.Handler;  
import android.view.View;  
import android.widget.TextView;  
import android.widget.Toast;
```

COPYRIGHT OFFICE
NEW DELHI
Reg. No. - SM/17187/2022
Date 30/08/2022

```
import com.android.volley.Request;  
import com.android.volley.Response;  
import com.android.volley.VolleyError;  
import com.android.volley.toolbox.StringRequest;  
import com.android.volley.toolbox.Volley;
```

```
import org.json.JSONArray;  
import org.json.JSONObject;
```

```
import me.ibrahimsn.lib.Speedometer;
```

```
public class Environment extends AppCompatActivity {
```

```
    private CardView crd_airQuality, crd_intensityOfLight, crd_temperature,  
    crd_humidity, crd_sound;  
    private Speedometer grp_airQuality, grp_intensityOfLight, grp_temperature,  
    grp_humidity, grp_sound;  
    private TextView lbl_airQuality, lbl_intensityOfLight, lbl_temperature,  
    lbl_humidity, lbl_sound;  
    private TextView lbl_airQualityNote, lbl_intensityOfLightNote,  
    lbl_temperatureNote, lbl_humidityNote, lbl_soundNote;
```

```
@Override
```

```
protected void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
    setContentView(R.layout.activity_environment);
```

```
    crd_airQuality = findViewById(R.id.crd_airQuality);  
    grp_airQuality = findViewById(R.id.grp_airQuality);  
    lbl_airQuality = findViewById(R.id.lbl_airQuality);
```



20/08/22

```
lbl_airQualityNote = findViewById(R.id.lbl_airQualityNote);

crd_intensityOfLight = findViewById(R.id.crd_intensityOfLight);
grp_intensityOfLight = findViewById(R.id.grp_intensityOfLight);
lbl_intensityOfLight = findViewById(R.id.lbl_intensityOfLight);
lbl_intensityOfLightNote = findViewById(R.id.lbl_intensityOfLightNote);

crd_temperature = findViewById(R.id.crd_temperature);
grp_temperature = findViewById(R.id.grp_temperature);
lbl_temperature = findViewById(R.id.lbl_temperature);
lbl_temperatureNote = findViewById(R.id.lbl_temperatureNote);

crd_humidity = findViewById(R.id.crd_humidity);
grp_humidity = findViewById(R.id.grp_humidity);
lbl_humidity = findViewById(R.id.lbl_humidity);
lbl_humidityNote = findViewById(R.id.lbl_humidityNote);

crd_sound = findViewById(R.id.crd_sound);
grp_sound = findViewById(R.id.grp_sound);
lbl_sound = findViewById(R.id.lbl_sound);
lbl_soundNote = findViewById(R.id.lbl_soundNote);
```

FetchAllInfo();

```
crd_airQuality.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Intent intent = new
Intent(Environment.this,EnvironmentHistory.class);
        intent.putExtra("ValueCode",1);
        intent.putExtra("ValueName","Air Quality (PPM)");
        intent.putExtra("ValueImage",R.drawable.img_air_quality);
        startActivity(intent);
    }
});

crd_intensityOfLight.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Intent intent = new
Intent(Environment.this,EnvironmentHistory.class);
        intent.putExtra("ValueCode",2);
        intent.putExtra("ValueName","Intensity of Light (Lux)");
        startActivity(intent);
    }
});

intent.putExtra("ValueImage",R.drawable.img_intensity_of_light);
startActivity(intent);
```



20/08/2023

```
});  
  
crd_temperature.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        Intent intent = new  
Intent(Environment.this,EnvironmentHistory.class);  
        intent.putExtra("ValueCode",3);  
        intent.putExtra("ValueName","Temperature (\u2103)");  
        intent.putExtra("ValueImage",R.drawable.img_temperature);  
        startActivity(intent);  
    }  
});
```

COPYRIGHT OFFICE
NEW DELHI
Reg. No. - SW-17187/2023
Date 30/08/2023

```
crd_humidity.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        Intent intent = new  
Intent(Environment.this,EnvironmentHistory.class);  
        intent.putExtra("ValueCode",4);  
        intent.putExtra("ValueName","Humidity (%)");  
        intent.putExtra("ValueImage",R.drawable.img_humidity);  
        startActivity(intent);  
    }  
});
```

```
crd_sound.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        Intent intent = new  
Intent(Environment.this,EnvironmentHistory.class);  
        intent.putExtra("ValueCode",5);  
        intent.putExtra("ValueName","Sound (db)");  
        intent.putExtra("ValueImage",R.drawable.img_sound);  
        startActivity(intent);  
    }  
});  
}
```

```
private void FetchAllInfo(){  
    String url = "http://udhyog4.in/Udhyog-40-Website/smart-foundry/vcc-  
setup/fetch-data/vcc-environment.php";  
    StringRequest stringRequest = new  
StringRequest(Request.Method.DEPRECATED_GET_OR_POST, url, new  
Response.Listener<String>() {
```

```
    @Override  
    public void onResponse(String response) {  
        try {
```

20/08/23



SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
JSONArray array = new JSONArray(response);
for (int i = 0; i < array.length(); i++){
    JSONObject fetchedValue = array.getJSONObject(i);
    SetValueToGraph(grp_airQuality, lbl_airQuality, "AIR
QUALITY", String.valueOf(fetchedValue.getString("Air
Quality")), "PPM", lbl_airQualityNote, " ");

SetValueToGraph(grp_intensityOfLight, lbl_intensityOfLight, "INTENSITY OF
LIGHT", String.valueOf(fetchedValue.getString("Intensity of
Light")), "Lux", lbl_intensityOfLightNote, "(9:00AM - 6:00PM)");

SetValueToGraph(grp_temperature, lbl_temperature, "TEMPERATURE", String.valueOf(fe
tchedValue.getString("Temperature")), "°C", lbl_temperatureNote, " ");

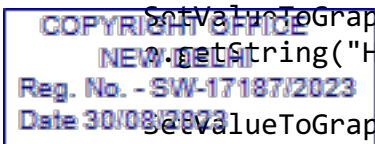
SetValueToGraph(grp_humidity, lbl_humidity, "HUMIDITY", String.valueOf(fetchedValu
e.getString("Humidity")), "%", lbl_humidityNote, " ");

SetValueToGraph(grp_sound, lbl_sound, "SOUND", String.valueOf(fetchedValue.getStri
ng("Sound")), "db", lbl_soundNote, " ");
}
}catch (Exception ex)
{

Toast.makeText(getApplicationContext(), ex.getMessage().toString(), Toast.LENGTH_
LONG).show();
}
}, new Response.ErrorListener() {
    @Override
    public void onErrorResponse(VolleyError error) {

Toast.makeText(getApplicationContext(), error.getMessage().toString(), Toast.LENG
TH_LONG).show();
}
});
Volley.newRequestQueue(getApplicationContext()).add(stringRequest);

final Handler handler = new Handler();
final Runnable runnable = new Runnable() {
    @Override
    public void run() {
        FetchAllInfo();
    }
};
handler.postDelayed(runnable, 25000);
```



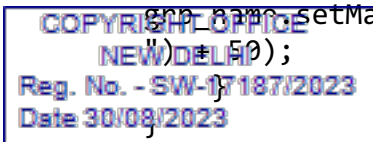
20/08/23

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
private void SetValueToGraph(Speedometer grp_name, TextView lbl_name,
String txt_name, String txt_value, String lbl_symbol, TextView lbl_note, String
txt_note) {
    Integer Value =
Integer.parseInt(Math.round(Float.parseFloat(txt_value))+""");
    grp_name.setSpeed(Value,1000L,null);
    grp_name.setMetricText(lbl_symbol);
    lbl_name.setText(txt_name);
    lbl_note.setText(txt_note);

    if( Value < 100)
        grp_name.setMaxSpeed(100);
    else
        grp_name.setMaxSpeed(Integer.parseInt(Math.round(Float.parseFloat(txt_value))+"""));
}
```



```
package com.example.smartfoundry;

import androidx.appcompat.app.AppCompatActivity;

import android.graphics.Color;
import android.os.Bundle;
import android.text.Editable;
import android.text.TextWatcher;
import android.view.View;
import android.widget.ImageView;
import android.widget.LinearLayout;
import android.widget.TextClock;
import android.widget.TextView;
import android.widget.Toast;

import com.android.volley.AuthFailureError;
import com.android.volley.Request;
import com.android.volley.RequestQueue;
import com.android.volley.Response;
import com.android.volley.VolleyError;
import com.android.volley.toolbox.StringRequest;
import com.android.volley.toolbox.Volley;
import com.github.mikephil.charting.charts.LineChart;
import com.github.mikephil.charting.components.XAxis;
import com.github.mikephil.charting.components.YAxis;
import com.github.mikephil.charting.data.Entry;
```



20/08/23

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
import com.github.mikephil.charting.data.LineData;
import com.github.mikephil.charting.data.LineDataSet;

import net.sourceforge.jtds.jdbc.DateTime;

import org.json.JSONArray;
import org.json.JSONObject;

import java.text.DateFormat;
import java.text.SimpleDateFormat;
import java.util.ArrayList;
import java.util.Calendar;
import java.util.Date;
import java.util.HashMap;
import java.util.List;
import java.util.Locale;
import java.util.Map;

public class EnvironmentHistory extends AppCompatActivity {

    private LineChart sgl_graph, hst_graph;
    private ImageView sgl_value, hst_value;
    private TextView HistoryHeading;
    private String ValueCode;
    private String EndDate,StartDate;

    private List<Entry> sgl_graphValue = new ArrayList<>();
    private List<Entry> hst_graphValue = new ArrayList<>();

    private LineData sgl_lineData;
    private LineData hst_lineData;

    private String[] sgl_xData = new String[90];
    private String[] hst_xData = new String[40];

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_environment_history);
        //Innialize the Value
        sgl_graph = findViewById(R.id.sgl_graph);
        hst_graph = findViewById(R.id.hst_graph);

        sgl_value = findViewById(R.id.sgl_value);
        hst_value = findViewById(R.id.hst_value);
        HistoryHeading = findViewById(R.id.HistoryHeading);
```



20/08/23

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
LinearLayout sgl_body = findViewById(R.id.sgl_body);
sgl_body.setVisibility(View.GONE);
```

```
//Fetch Data From Past Activity
ValueCode = String.valueOf(getIntent().getIntExtra("ValueCode" , 1));
HistoryHeading.setText(getIntent().getStringExtra("ValueName"));
```

```
sgl_value.setImageResource(getIntent().getExtras().getInt("ValueImage"));
```

```
hst_value.setImageResource(getIntent().getExtras().getInt("ValueImage"));
```

```
//Set Date For History of Last 30 Days
Calendar calendar = Calendar.getInstance();
DateFormat dateFormat = new SimpleDateFormat("yyyy-MM-dd",
Locale.getDefault());
```

```
StartDate = dateFormat.format(calendar.getTime());
```

```
calendar.add(Calendar.DATE, -30);
```

```
EndDate = dateFormat.format(calendar.getTime());
```

```
//Fetch history from DataBase using API
```

```
SingleDayGraph();
```

```
ThirtyDayGraph();
```

```
}
```

```
private void SingleDayGraph(){
```

```
SetSglGraphValue();
```

```
}
```

```
private void ThirtyDayGraph(){
```

```
SetHstGraphValue();
```

```
}
```

```
private void SetSglGraphValue() {
```

```
String url = "http://udhyog4.in/Udhyog-40-Website/smart-foundry/vcc-  
setup/fetch-data/vcc-graph-filter.php";
```

```
//String url = "http://udhyog4.in/Udhyog-40-Website/smart-foundry/vcc-  
setup/fetch-data/vcc-environment-graph.php";
```

```
StringRequest stringRequest = new StringRequest(Request.Method.POST,  
url, new Response.Listener<String>() {
```

```
@Override
```

```
public void onResponse(String response) {
```

```
try {
```

```
JSONArray array = new JSONArray(response);
```

```
for (int j = 0; j < array.length(); j++){
```

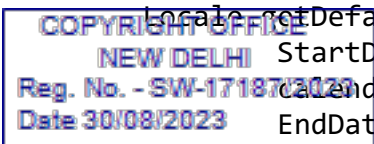
```
JSONObject temprature = array.getJSONObject(j);
```

```
Date date = new SimpleDateFormat("yyyy-MM-
```

```
se(String.valueOf(temprature.getString("Date"))));
```

```
SimpleDateFormat dateFormat = new
```

```
SimpleDateFormat("dd/MM", Locale.getDefault());
```



20/08/23

```

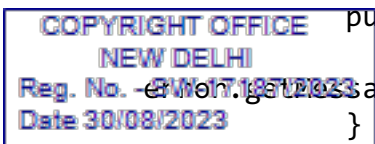
        sgl_xData[j] =
dateFormat.format(date.getTime()).toString();
        sgl_graphValue.add(new
Entry(j,Float.parseFloat(String.valueOf(temprature.getString("Average"))));
    }
    FloatSglGraph();
} catch (Exception ex)
{
    Toast.makeText(getApplicationContext(),"ERROR: " +
ex.getMessage().toString(),Toast.LENGTH_SHORT).show();
}
}
}, new Response.ErrorListener() {
    @Override
    public void onErrorResponse(VolleyError error) {
        Toast.makeText(getApplicationContext(),"ERROR: " +
error.getMessage().toString(),Toast.LENGTH_SHORT).show();
    }
}){
    @Override
    protected Map<String, String> getParams() throws AuthFailureError {
        Map<String, String> params = new HashMap<>();
        //params.put("date1", StartDate);
        //params.put("date2", EndDate);
        params.put("date1", "2021-04-01");
        params.put("date2", "2021-04-29");
        params.put("type", ValueCode);
        return params;
    }
};
RequestQueue requestQueue =
Volley.newRequestQueue(getApplicationContext());
requestQueue.add(stringRequest);
}
private void FloatSglGraph(){
    LineDataSet lineDataSet = new LineDataSet(sgl_graphValue, "ValueName");
    sgl_lineData = new LineData(lineDataSet);

    YAxis rightYAxis = sgl_graph.getAxisRight();
    rightYAxis.setEnabled(false);

    XAxis xAxis = sgl_graph.getXAxis();
    xAxis.setGranularity(1f);
    xAxis.setEnabled(true);
    xAxis.setPosition(XAxis.XAxisPosition.BOTTOM);

    lineDataSet.setMode(LineDataSet.Mode.CUBIC_BEZIER);
    lineDataSet.setColors(Color.rgb(0, 0, 0));

```



20/08/23

```

lineDataSet.setValueTextSize(12f);
lineDataSet.setLineWidth(4f);
lineDataSet.setDrawCircleHole(true);
lineDataSet.setDrawFilled(true);
lineDataSet.setFill(Color.parseColor("#196F3D"));
lineDataSet.setColor(Color.parseColor("#196F3D"));
lineDataSet.setCircleRadius(5f);

sgl_graph.getXAxis().setValueFormatter(new
com.github.mikephil.charting.formatter.IndexAxisValueFormatter(sgl_xData));
sgl_graph.setData(sgl_lineData);
sgl_graph.setTouchEnabled(true);
sgl_graph.setVisibleXRangeMaximum(8);
sgl_graph.moveViewToX(sgl_graphValue.size() - 8);
sgl_graph.getDescription().setEnabled(false);
sgl_graph.getLegend().setEnabled(false);
sgl_graph.setDrawBorders(true);
sgl_graph.invalidate();
}

private void SetHstGraphValue() {
    String url = "http://udhyog4.in/Udhyog-40-Website/smart-foundry/vcc-
setup/fetch-data/vcc-graph-filter.php";
    StringRequest stringRequest = new StringRequest(Request.Method.POST,
url, new Response.Listener<String>() {
        @Override
        public void onResponse(String response) {
            try {
                JSONArray array = new JSONArray(response);
                for (int j = 0; j < array.length(); j++){
                    JSONObject temprature = array.getJSONObject(j);
                    Date date = new SimpleDateFormat("yyyy-MM-
dd").parse(String.valueOf(temprature.getString("Date")));
                    SimpleDateFormat dateFormat = new
SimpleDateFormat("dd/MM", Locale.getDefault());
                    hst_xData[j] =
dateFormat.format(date.getTime()).toString();
                    hst_graphValue.add(new
Entry(j,Float.parseFloat(String.valueOf(temprature.getString("Average")))));
                }
                FloatHstGraph();
            }catch (Exception ex)
            {
                Toast.makeText(getApplicationContext(),"ERROR: " +
ex.getMessage().toString(),Toast.LENGTH_SHORT).show();
            }
        }
    }, new Response.ErrorListener() {

```



20/08/23

```

@Override
public void onErrorResponse(VolleyError error) {
    Toast.makeText(getApplicationContext(),"ERROR: " +
error.getMessage().toString(),Toast.LENGTH_SHORT).show();
}
}}{
@Override
protected Map<String, String> getParams() throws AuthFailureError {
    Map<String, String> params = new HashMap<>();
    //params.put("date1", StartDate);
    //params.put("date2", EndDate);
    params.put("date1", "2021-04-01");
    params.put("date2", "2021-04-30");
    params.put("type", ValueCode);
    return params;
}
}

RequestQueue requestQueue =
Volley.newRequestQueue(getApplicationContext());
requestQueue.add(stringRequest);
}

private void FloatHstGraph(){
    LineDataSet lineDataSet = new LineDataSet(hst_graphValue, "ValueName");
    hst_lineData = new LineData(lineDataSet);

    YAxis rightYAxis = hst_graph.getAxisRight();
    rightYAxis.setEnabled(false);

    XAxis xAxis = hst_graph.getXAxis();
    xAxis.setGranularity(1f);
    xAxis.setEnabled(true);
    xAxis.setPosition(XAxis.XAxisPosition.BOTTOM);

    lineDataSet.setMode(LineDataSet.Mode.CUBIC_BEZIER);
    lineDataSet.setColors(Color.rgb(0, 0, 0));
    lineDataSet.setValueTextSize(12f);
    lineDataSet.setLineWidth(4f);
    lineDataSet.setDrawCircleHole(true);
    lineDataSet.setDrawFilled(true);
    lineDataSet.setFillColor(Color.parseColor("#196F3D"));
    lineDataSet.setColor(Color.parseColor("#196F3D"));
    lineDataSet.setCircleRadius(5f);

    hst_graph.getXAxis().setValueFormatter(new
com.github.mikephil.charting.formatter.IndexAxisValueFormatter(hst_xData));
    hst_graph.setData(hst_lineData);
    hst_graph.setTouchEnabled(true);
    hst_graph.setVisibleXRangeMaximum(8);

```



20/08/23

SMART Foundry

Marwadi University (Registrar – Mr Naresh Dilawarsinh Jadeja), Dr. Amit Sata, Mr Brijesh Barasiya

```
hst_graph.moveViewToX(hst_graphValue.size() - 8);  
hst_graph.getDescription().setEnabled(false);  
hst_graph.getLegend().setEnabled(false);  
hst_graph.setDrawBorders(true);  
hst_graph.invalidate();  
}  
}
```

COPYRIGHT OFFICE
NEW DELHI
Reg. No. - SW-17187/2023
Date 30/08/2023



20/08/23