



İNÖNÜ ÜNİVERSİTESİ MÜHENDİSLİK FAKÜLTESİ
BİLGİSAYAR MÜHENDİSLİĞİ BÖLÜMÜ
BİLGİSAYAR MÜHENDİSLİĞİ GELİŞTİRME 4 DERSİ

PROJE ADI : CHAT APP

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CHAT APP, akıllı telefonlar için geliştirilen, platformlar arası çalışma özelliğine sahip bir anlık mesajlaşma uygulamasıdır.



CHAT APP İÇİN KULLANILAN TEKNOLOJİLER:

- Java
- Android Studio
- Firebase

PROJE ARAYÜZÜ

1- Chat Activity

Mesajların ve kullanıcıların görüntülendiği ekrandır.

```
public class ChatActivity extends AppCompatActivity {
    private FirebaseAuth mAuth;
    RecyclerView recyclerView; //her şeyi birbirine bağlamak için
    RecyclerViewAdapter recyclerViewAdapter;
    EditText messageText;

    FirebaseDatabase database;
    DatabaseReference databaseReference;

    private ArrayList<String> chatMessages = new ArrayList<>();

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        MenuInflater inflater = getMenuInflater();
        inflater.inflate(R.menu.option_menu, menu);
        return super.onCreateOptionsMenu(menu);
    }

    @Override
    public boolean onOptionsItemSelected(MenuItem item) {

        if(item.getItemId() == R.id.options_menu_sign_out){
            mAuth.signOut();
            Intent intent = new Intent(getApplicationContext(), SignUpActivity.class);
            startActivity(intent);
        } else if (item.getItemId() == R.id.options_menu_profile){
            Intent intent = new Intent(getApplicationContext(), ProfileActivity.class);
            startActivity(intent);
        }
    }
}
```

```

        return super.onOptionsItemSelected(item);
    }

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

        // chatMessages.add("121212");
        // chatMessages.add("sss");

        messageText = findViewById(R.id.chat_activity_message_text);
        recyclerView = findViewById(R.id.recycler_view);
        recyclerViewAdapter = new RecyclerViewAdapter(chatMessages);
        RecyclerView.LayoutManager recyclerViewLayoutManager = new LinearLayoutManager(getApplicationContext());
        recyclerView.setLayoutManager(recyclerViewLayoutManager);
        recyclerView.setItemAnimator(new DefaultItemAnimator());
        recyclerView.setAdapter(recyclerViewAdapter);

        mAuth = FirebaseAuth.getInstance();
        database = FirebaseDatabase.getInstance();
        databaseReference = database.getReference();

        getData();
    }

    public void sendMessage(View view){
        String messageToSend = messageText.getText().toString();

```

```

        UUID uuid = UUID.randomUUID();
        String uuidString = uuid.toString();

        FirebaseUser user = mAuth.getCurrentUser();
        String userEmail = user.getEmail().toString();

        databaseReference.child("Chats").child(uuidString).child("usermessage").setValue(messageToSend);
        databaseReference.child("Chats").child(uuidString).child("useremail").setValue(userEmail);
        databaseReference.child("Chats").child(uuidString).child("usermessagetime").setValue(ServerValue.TIMESTAMP);

        messageText.setText("");

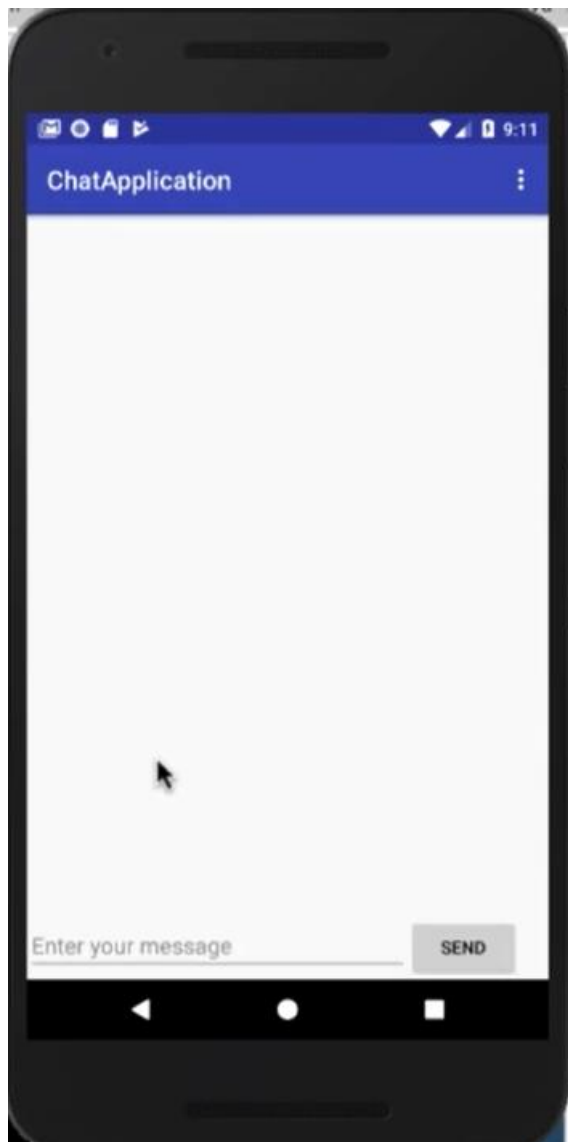
        getData();
    }

    public void getData(){
        DatabaseReference newReference = database.getReference("Chats");

        Query query = newReference.orderByChild("usermessagetime");

        query.addValueEventListener(new ValueEventListener() {
            @Override
            public void onDataChange(@NonNull DataSnapshot dataSnapshot) {
                // System.out.println("dataSnapshot Children" +dataSnapshot.getChildren());
                // System.out.println("dataSnapshot Value" +dataSnapshot.getValue());
                // System.out.println("dataSnapshot Key" +dataSnapshot.getKey());

```



2- Profile Activity :

Kullanıcıların profil fotoğrafı ve yaşını girdiği ekrandır.

```
public class ProfileActivity extends AppCompatActivity {
    EditText ageText;
    ImageView userImageView;
    Uri selected;
    private FirebaseDatabase database;
    private DatabaseReference databaseReference;
    private StorageReference storageReference;
    private FirebaseAuth mAuth;

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

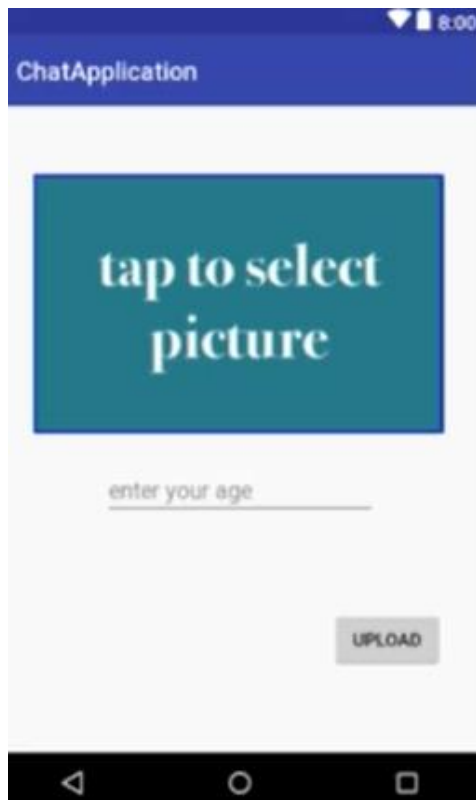
        ageText = findViewById(R.id.ageText);
        userImageView = findViewById(R.id.userimageView);

        database = FirebaseDatabase.getInstance();
        databaseReference = database.getReference();
        storageReference = FirebaseStorage.getInstance().getReference();
        mAuth = FirebaseAuth.getInstance();

        getData();
    }

    public void getData() {

        DatabaseReference newReference = database.getReference(" Profiles");
        newReference.addValueEventListener(new ValueEventListener() {
```

3- RecyclerView Adapter :

Mesajların hangi sırada geldiğinin görüntelendiği ekrandır.

```
public class RecyclerViewAdapter extends RecyclerView.Adapter<RecyclerViewAdapter.MyViewHolder> {  
  
    private List<String> chatMessages;  
  
    @NonNull  
    @Override  
    public MyViewHolder onCreateViewHolder(@NonNull ViewGroup parent, int viewType) {  
        View itemView = LayoutInflater.from(parent.getContext()).inflate(R.layout.recycler_list_row, parent, false);  
        return new MyViewHolder(itemView);  
    }  
  
    @Override  
    public void onBindViewHolder(@NonNull MyViewHolder holder, int position) {  
  
        String chatMessage = chatMessages.get(position); //hangi sıradaysak o sıradaki mesajı gösterir  
        holder.chatMessage.setText(chatMessage);  
  
    }  
  
    @Override  
    public int getItemCount() { return chatMessages.size(); } //kaç mesaj varsa o kadar bırak  
  
    public RecyclerViewAdapter(List<String> chatMessages) { this.chatMessages = chatMessages; }  
  
    public class MyViewHolder extends RecyclerView.ViewHolder {  
  
        public TextView chatMessage;  
  
        public MyViewHolder(@NonNull View itemView) {  
            super(itemView);  
        }  
    }  
}
```



4- Sign Up Activity:

Kullanıcıların sisteme giriş yapabilmek için mail ve şifrelerini girdiği ekrandır.

```
public class SignUpActivity extends AppCompatActivity {
    EditText emailText,passwordText;

    private FirebaseAuth mAuth;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_sign_up);
        emailText = findViewById(R.id.user_email_edit_text);
        passwordText = findViewById(R.id.user_password_edit_text);
        mAuth = FirebaseAuth.getInstance();

        FirebaseUser user = mAuth.getCurrentUser();
        if(user != null){
            Intent intent = new Intent(getApplicationContext(),ChatActivity.class);
            startActivity(intent);
        }
    }

    public void signUp(View view){ //onclick metodu ile burdaki metodlar birbirine bağlandıSSss
        mAuth.createUserWithEmailAndPassword(emailText.getText().toString(),passwordText.getText().toString())
            .addOnCompleteListener(this, new OnCompleteListener<AuthResult>() {
                @Override
                public void onComplete(@NonNull Task<AuthResult> task) {
                    if( task.isSuccessful()){
                        //intent
                        // FirebaseUser user = mAuth.getCurrentUser();
                        // String useremail = user.getEmail().toString();
                        // System.out.println("user e-mail:" +useremail);,
                    }
                }
            })
    }
}
```

