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"use client"

import { use, useEffect, useState, type JSX } from "react"
import { Button } from "@/components/ui/button"
import { Card, CardContent } from "@/components/ui/card"
import { Progress } from "@/components/ui/progress"
import { Badge } from "@/components/ui/badge"
import {
  Zap, Shield,
  Swords, Package, User2, LogOut, Bird, Bug, Circle,
  Droplet, Eye, Flame, Ghost, Globe, HelpCircle, Leaf,
  Moon, Skull, Snowflake, Sparkles, Mountain,
  Star,
  ArrowLeft
} from "lucide-react"
import { SimplePokeballIcon } from "@/components/ui/pokeball-icon"
import type { Pokemon, Pokemon_in_battle, Moves } from "@/lib/types"
import { motion, AnimatePresence } from "framer-motion"
import { calculateTypeEffectiveness, PokemonType } from "@/lib/typeEffectiveness"
import battlefieldImage from "@/assets/pokemon-battlefield.png";

import React from "react"

// All possible menu options
type MenuOption = "main" | "attack" | "pokemon" | "items" | "run"

// Props for the PokemonBattler component
type PokemonBattlerProps = {
  FullUserTeam: Pokemon[];
  FullOpponentTeam: Pokemon[];
  onEndofBattle: () => void;
}

/**
 * PokemonBattler component for handling battles between two Pokémon teams.
 * This component manages the battle state, animations, and interactions between
the player's team and the opponent's team.
 * It includes functionality for selecting moves, switching Pokémon, and
displaying battle text.
 * @param FullUserTeam - The full team of the user, containing Pokémon objects
 * @param FullOpponentTeam - The full team of the opponent, containing Pokémon
objects
 * @param onEndofBattle - Callback function to be called when the battle ends
 * @returns
 */
export default function pokemon_battle({
  FullUserTeam,
  FullOpponentTeam,
  onEndofBattle
}: PokemonBattlerProps) {

  // Making the teams battle-ready

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    // This includes setting current HP, PP, and other battle-related properties
    // This is done using useMemo to avoid unnecessary recalculations on every
render
    const initialUserTeam = React.useMemo(
      () => FullUserTeam.map((p) => p.makeBattleReady()),
      [FullUserTeam]
    )
    const initialOpponentTeam = React.useMemo(
      () => FullOpponentTeam.map((p) => p.makeBattleReady()),
      [FullOpponentTeam]
    )
    // Team States to manage the player's and opponent's Pokémon teams
    const [playerTeam, setPlayerTeam] = useState<Pokemon_in_battle[]>
(initialUserTeam)
    const [opponentTeam, setOpponentTeam] = useState<Pokemon_in_battle[]>
(initialOpponentTeam)

    // Active Pokémon Indices
    const [activePlayerIndex, setActivePlayerIndex] = useState(0)
    const [activeOpponentIndex, setActiveOpponentIndex] = useState(0)

    // Active Pokémon from the current teams
    const playerPokemon = playerTeam[activePlayerIndex]
    const opponentPokemon = opponentTeam[activeOpponentIndex]

    // Battle Text initial with current player Pokémon
    const [battleText, setBattleText] = useState(() => `What will
${playerPokemon.name} do?`)

    // Battle States needed to manage the Battle Flow
    const [isPlayerTurn, setIsPlayerTurn] = useState(true)
    const [isAnimating, setIsAnimating] = useState(false)
    const [currentMenu, setCurrentMenu] = useState<MenuOption>("main")
    const [showRunConfirmation, setShowRunConfirmation] = useState(false)

    // Animation States for Player
    const [isSwitchingPlayer, setIsSwitchingPlayer] = useState(false)
    const [switchingInPlayer, setSwitchingInPlayer] = useState<Pokemon_in_battle |
null>(null)
    const [switchingOutPlayer, setSwitchingOutPlayer] = useState<Pokemon_in_battle
| null>(null)
    const [switchDirectionPlayer, setSwitchDirectionPlayer] = useState<"in" |
"out">("out")

    // Animation States for Opponent
    const [isSwitchingOpponent, setIsSwitchingOpponent] = useState(false)
    const [switchingInOpponent, setSwitchingInOpponent] =
useState<Pokemon_in_battle | null>(null)
    const [switchingOutOpponent, setSwitchingOutOpponent] =
useState<Pokemon_in_battle | null>(null)
    const [switchDirectionOpponent, setSwitchDirectionOpponent] = useState<"in" |
"out">("out")

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// Pending Action State to manage the next action in the battle
type PendingAction = null |
{ type: "playerMoveFirst"; move: Moves } |
{ type: "opponentMoveFirst"; move?: Moves } |
{ type: "playerMoveSecond"; move: Moves } |
{ type: "opponentMoveSecond"; move?: Moves } |
{ type: "switchPokemon"; newPokemon: Pokemon_in_battle } |
{ type: "switchOpponent"; newPokemon: Pokemon_in_battle } |
{ type: "ForcedSwitch"; newPokemon: Pokemon_in_battle }

const [pendingAction, setPendingAction] = useState<PendingAction>(null)
const delay = (ms: number) => new Promise((res) => setTimeout(res, ms));

/**
 * Updates a Pokémon in the team.
 * @param team - The current team of Pokémon.
 * @param setTeam - The state setter function for the team.
 * @param index - The index of the Pokémon to update.
 * @param updated - The updated Pokémon data.
 */
function updateTeamPokemon(
  team: Pokemon_in_battle[],
  setTeam: React.Dispatch<React.SetStateAction<Pokemon_in_battle[]>>,
  index: number,
  updated: Pokemon_in_battle
) {
  console.log("Logs from updateTeamPokemon: ", team, setTeam, index,
updated);
  setTeam(prev =>
    prev.map((p, i) => (i === index ? updated : p))
  );
}

/**
 * Performs a switch between Pokémon in the battle.
 * @param newPokemon - The new Pokémon to switch in.
 * @param isPlayer - Indicates if the switch is for the player or the
opponent.
 * @param forced - Indicates if the switch is forced (e.g., after fainting).
 * @returns A promise that resolves when the switch is complete.
 */
const performSwitch = async ({
  newPokemon,
  isPlayer,
  forced = false,
}: {
  newPokemon: Pokemon_in_battle;
  isPlayer: boolean;
  forced?: boolean;
}) => {
  // Checks which team and active index to use based on whether it's the
player or opponent
  const team = isPlayer ? playerTeam : opponentTeam;
  const activeIndex = isPlayer ? activePlayerIndex : activeOpponentIndex;
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const currentPokemon = team[activeIndex];

// Checks if the new Pokémon is valid for switching
if (!newPokemon || newPokemon.id === currentPokemon.id ||
newPokemon.currentHP <= 0) {
    console.log("Invalid Pokémon for switching");
    return;
}

// Checks if the current Pokémon is fainted and if a forced switch is
allowed
if (forced && currentPokemon.currentHP > 0) {
    console.log("Forced switch not allowed when Pokémon is still alive");
    return;
}

// Start switch animation
if (isPlayer) {
    setIsSwitchingPlayer(true);
    setSwitchingOutPlayer(currentPokemon);
    setSwitchingInPlayer(newPokemon);
    setSwitchDirectionPlayer("out");
} else {
    setIsSwitchingOpponent(true);
    setSwitchingOutOpponent(currentPokemon);
    setSwitchingInOpponent(newPokemon);
    setSwitchDirectionOpponent("out");
}

// Battle text for switching Pokémon
setBattleText(`Come back, ${currentPokemon.name}!`);
await delay(1000);

// Update the current Battle state to reflect the switch
if (isPlayer) {
    setSwitchDirectionPlayer("in");
} else {
    setSwitchDirectionOpponent("in");
}

setBattleText(`Go, ${newPokemon.name}!`);
await delay(1000);

// Update the team with the new Pokémon
const newIndex = team.findIndex((p) => p.id === newPokemon.id);
if (newIndex !== -1) {
    if (isPlayer) {
        setActivePlayerIndex(newIndex);
        setIsSwitchingPlayer(false);
        setSwitchingOutPlayer(null);
        setSwitchingInPlayer(null);
        setCurrentMenu("main");
    } else {
        setActiveOpponentIndex(newIndex);
    }
}
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        setIsSwitchingOpponent(false);
        setSwitchingOutOpponent(null);
        setSwitchingInOpponent(null);
    }
}

if (isPlayer) {
    setBattleText(`What will ${newPokemon.name} do?`);
}
setIsAnimating(false);
};

/**
 * Performs a attack move in the battle. It updates the Pokémon's stats,
 * calculates damage, and handles animations.
 * * This function calculates the damage based on the move's power, type
 * effectiveness, and Pokémon stats.
 * * It handles critical hits, STAB (Same Type Attack Bonus), and type
 * effectiveness.
 * @param attacker - The Pokémon performing the attack.
 * @param defender - The Pokémon receiving the attack.
 * @param move - The move being used.
 * @param isPlayerAttacker - Whether the attacker is the player.
 * @returns The result of the attack move.
 */
const performMove = async (
    attacker: Pokemon_in_battle,
    defender: Pokemon_in_battle,
    move: Moves,
    isPlayerAttacker: boolean
) => {
    // Start attack animation
    setIsAnimating(true);

    // Calculate the damage based on the move's power, type effectiveness, and
    // Pokémon stats
    // This includes critical hits, STAB (Same Type Attack Bonus), and random
    // damage variation
    const criticalHit = Math.random() < 0.0625;
    const criticalMultiplier = criticalHit ? 1.5 : 1;

    const stab = attacker.types.includes(move.type) ? 1.5 : 1;
    const typeEffectiveness = calculateTypeEffectiveness(
        (move.type as string).toLowerCase() as PokemonType,
        (defender.types as string[]).map((type) => type.toLowerCase() as
    PokemonType)
    );
    const random = (Math.floor(Math.random() * (255 - 217 + 1)) + 217) / 255;
    // 0.85-1.0

    let damage = 0;
    // Calculate damage based on the move's damage class
    if (move.damageClass === "physical") {
        damage = Math.floor(

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        (((2 * attacker.lvl * criticalMultiplier) / 5 + 2) * move.power *
        (attacker.attack / defender.defense)) / 50 + 2)
        * stab * typeEffectiveness * random
    );
} else if (move.damageClass === "special") {
    damage = Math.floor(
        (((2 * attacker.lvl * criticalMultiplier) / 5 + 2) * move.power *
        (attacker.special_attack / defender.special_defense)) / 50 + 2)
        * stab * typeEffectiveness * random
    );
}

console.log("Calculated damage:", damage);

// Ensure that the newHp for the defender is not negative
const newHp = Math.max(0, defender.currentHP - damage);

// Update the teams and Pokémon states based on the attack
const attackerIndex = isPlayerAttacker ? activePlayerIndex :
activeOpponentIndex;
const defenderIndex = isPlayerAttacker ? activeOpponentIndex :
activePlayerIndex;
const attackerTeam = isPlayerAttacker ? playerTeam : opponentTeam;
const defenderTeam = isPlayerAttacker ? opponentTeam : playerTeam;
const setAttackerTeam = isPlayerAttacker ? setPlayerTeam :
setOpponentTeam;
const setDefenderTeam = isPlayerAttacker ? setOpponentTeam :
setPlayerTeam;

const updatedAttacker = attacker.clone();
// Update the attacker's PP for the used move
updatedAttacker.setCurrentPP(move.name, Math.max(0,
updatedAttacker.getCurrentPP(move.name) - 1));
updateTeamPokemon(attackerTeam, setAttackerTeam, attackerIndex,
updatedAttacker);

const isStatusMove = move.damageClass === "status";

if (!isStatusMove) {
    const updatedDefender = defender.clone();
    updatedDefender.setCurrentHP(newHp);
    updateTeamPokemon(defenderTeam, setDefenderTeam, defenderIndex,
updatedDefender);
}

// Kampftext und Animation
setBattleText(`${attacker.name} used ${move.name}!`);
await delay(1000);

if (criticalHit) {
    setBattleText(`A critical hit!`);
    await delay(1000);
}
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    if (!isStatusMove) {
      if (typeEffectiveness > 1) {
        setBattleText(`It's super effective!`);
        await delay(1000);
      } else if (typeEffectiveness < 1) {
        setBattleText(`It's not very effective...`);
        await delay(1000);
      } else {
        setBattleText(`${defender.name} took ${damage} damage!`);
        await delay(1000);
      }
    }
  }

  // Fainting Handling
  if (newHp === 0) {
    setBattleText(`${defender.name} fainted!`);
    console.log(`${defender.name} fainted!`);
    await delay(1000);

    // Check if there are any available Pokémon left in the defender's
team
    const availableDefenderPokemon = defenderTeam.filter(
      (p) => p.currentHP > 0 && p.id !== defender.id
    );

    if (availableDefenderPokemon.length > 0) {
      // If there are available Pokémon, switch to one of them
      const nextPokemon =
availableDefenderPokemon[Math.floor(Math.random() *
availableDefenderPokemon.length)];
      setBattleText(isPlayerAttacker ? "Opponent is switching
Pokémon..." : "Please choose your next Pokémon.");
      await delay(1000);

      // Automatically switch for the opponent
      if (isPlayerAttacker) {
        console.log("Opponent switching Pokémon:", nextPokemon.name);
        setPendingAction({ type: "switchOpponent", newPokemon:
nextPokemon });
        return newHp;
      } else {
        // Set the switching state for the player so that the Menu
opens
        setCurrentMenu("pokemon");
        console.log("Player must choose next Pokémon.");
        return newHp;
      }
    } else {
      // If no Pokémon left, end the battle
      setBattleText(isPlayerAttacker ? "Opponent has no Pokémon left!
You win!" : "All your Pokémon fainted!");
      setBattleText(isPlayerAttacker ? "You win!" : "You lost!");
      console.log(isPlayerAttacker ? "Player wins!" : "Player lost.");
      setPendingAction(null);
    }
  }
}

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        setIsAnimating(false);
        return newHp;
    }
}
setIsAnimating(false);
};

// Log pending actions for debugging
useEffect(() => {
    console.log(pendingAction);

}, [pendingAction]);

useEffect(() => {
    // If there is no pending action, do nothing
    if (!pendingAction) return;

    // Helper to process player's move
    const processPlayerMove = async (move: Moves, first?: boolean) => {
        const result = await performMove(playerTeam[activePlayerIndex],
opponentTeam[activeOpponentIndex], move, true);
        // If this is the first move of the turn, set the pending action for
the opponent's move
        if (first && result !== 0) {
            setIsPlayerTurn(false);
            setPendingAction({ type: "opponentMoveSecond" });
            setIsAnimating(true);
        } else {
            setBattleText(`What will ${playerTeam[activePlayerIndex].name} do?`);
            setIsPlayerTurn(true);
        }
    }

    // Helper to process opponent's move
    const processOpponentMove = async (move?: Moves, first?: boolean) => {
        const activeOpponentPokemon = opponentTeam[activeOpponentIndex];
        const randomMove =
activeOpponentPokemon.moveset[Math.floor(Math.random() *
activeOpponentPokemon.moveset.length)];
        const result = await performMove(activeOpponentPokemon,
playerTeam[activePlayerIndex], randomMove, false);

        if (first && move && result !== 0) {
            setIsPlayerTurn(true);
            setPendingAction({ type: "playerMoveSecond", move: move });
            setIsAnimating(true);
        } else{
            setBattleText(`What will ${playerTeam[activePlayerIndex].name} do?`);
            setIsPlayerTurn(true);
            setIsAnimating(false);
        }
    }
};

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// Helper to process player switching Pokémon
const processSwitchPokemon = async (newPokemon: Pokemon_in_battle) => {
  await performSwitch({ newPokemon, isPlayer: true });
  setIsPlayerTurn(false); // Spieler war dran, hat gewechselt, jetzt
  setPendingAction({ type: "opponentMoveSecond" });
};

// Helper to process opponent switching Pokémon
const processSwitchOpponent = async (newPokemon: Pokemon_in_battle) => {
  console.log("Opponent switching Pokémon:", newPokemon.name);
  await performSwitch({ newPokemon, isPlayer: false });
  setIsAnimating(false);
  setIsPlayerTurn(true);
  setBattleText(`What will ${playerTeam[activePlayerIndex].name} do?`);
};

// Helper to process forced switch (player's Pokémon fainted)
const processForcedSwitch = async (newPokemon: Pokemon_in_battle) => {
  const availablePlayerPokemon = playerTeam.filter(
    (p) => p.currentHP > 0 && p.id !== playerPokemon.id
  );
  if (availablePlayerPokemon.length === 0) {
    setBattleText("All your Pokémon have fainted! You lose!");
    console.log("Player lost, no Pokemon left");
    return;
  } else {
    // If there are available Pokémon, allow switching
    await performSwitch({ newPokemon, isPlayer: true, forced: true });
    setIsPlayerTurn(true);
    setBattleText(`What will ${newPokemon.name} do?`);
  }
};

// Process the pending action based on its type
(async () => {
  console.log("Pending action:", pendingAction);
  if (pendingAction.type === "playerMoveFirst") {
    await processPlayerMove(pendingAction.move, true);
  } else if (pendingAction.type === "opponentMoveSecond") {
    await processOpponentMove(pendingAction.move, false);
  } else if (pendingAction.type === "opponentMoveFirst") {
    await processOpponentMove(pendingAction.move, true);
  } else if (pendingAction.type === "playerMoveSecond") {
    await processPlayerMove(pendingAction.move, false);
  } else if (pendingAction.type === "switchPokemon") {
    await processSwitchPokemon(pendingAction.newPokemon);
  } else if (pendingAction.type === "switchOpponent") {
    await processSwitchOpponent(pendingAction.newPokemon);
  } else if (pendingAction.type === "ForcedSwitch") {
    await processForcedSwitch(pendingAction.newPokemon);
  }
}

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    })();
  }, [pendingAction]);

  // Handles the player's move selection and updates the battle state
  accordingly
  const handlePlayerMove = (move: Moves) => {
    if (!isPlayerTurn || isAnimating) return
    console.log("Player's turn to move:", move.name);
    setPendingAction({ type: "playerMoveFirst", move })
    setIsAnimating(true)
    setCurrentMenu("main")
    setBattleText(`${playerPokemon.name} used ${move.name}!`)
  }

  // Handles the opponent's move selection and updates the battle state
  accordingly
  const handleOpponentMove = (move: Moves) => {
    if (isAnimating) return;
    setIsPlayerTurn(false)
    console.log("Opponent's turn to move:", move.name);
    setPendingAction({ type: "opponentMoveFirst", move })
    setIsAnimating(true)
    setCurrentMenu("main")
    setBattleText(`${opponentPokemon.name} used ${move.name}!`)
  }

  // Handles the menu selection and updates the current menu state
  const handleMenuSelect = (menu: MenuOption) => {
    if (menu === "items") {
      setBattleText("Your bag is empty!")
      return
    }

    if (menu === "run" || (menu === "main" && currentMenu === "main")) {
      setShowRunConfirmation(true)
      setBattleText("Are you sure you want to give up?")
      return
    }

    setCurrentMenu(menu)
    if (menu === "main") {
      setBattleText("What will " + playerPokemon.name + " do?")
    }
  }

  // Handles the run action confirmation
  const handleRunConfirm = () => {
    setBattleText("You ran away from the battle!")
    setShowRunConfirmation(false)
    onEndofBattle()
  }

  // Handles the run action cancellation
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const handleRunCancel = () => {
  setShowRunConfirmation(false)
  setBattleText("What will " + playerPokemon.name + " do?")
}

// Handles the Pokémon selection from the player's team when switching Pokémon
// is forced
const handlePokemonSelect = (pokemon: Pokemon_in_battle) => {
  // Dead Pokémon cannot be selected
  if (pokemon.currentHP <= 0) return;

  const currentPlayer = playerTeam[activePlayerIndex];

  // If the current Pokémon is still alive and the same one is selected,
  // cancel
  if (currentPlayer.currentHP > 0 && pokemon.id === currentPlayer.id)
    return;

  // If the current Pokémon is fainted, a forced switch occurs (e.g., after
  // fainting)
  if (currentPlayer.currentHP === 0) {
    setPendingAction({ type: "ForcedSwitch", newPokemon: pokemon });
  } else {
    // Normal switch through Pokemon menu
    switchPlayerPokemon(pokemon);
  }
};

// Handles the Player's Pokémon switch action through the Pokémon menu
const switchPlayerPokemon = (newPokemon: Pokemon_in_battle) => {
  if (isAnimating || !isPlayerTurn) return
  console.log("Switching player Pokémon:", newPokemon.name);
  setPendingAction({ type: "switchPokemon", newPokemon })
}

// Handles the Opponent's Pokémon switch action through the Pokémon menu
const switchOpponentPokemon = (newPokemon: Pokemon_in_battle) => {
  if (isAnimating || isPlayerTurn) return
  console.log("Switching opponent Pokémon:", newPokemon.name);
  setPendingAction({ type: "switchOpponent", newPokemon })
  setCurrentMenu("main")
}

// Returns the color class for a Pokémon type
const getTypeColor = (type: string): string => {
  const colors: { [key: string]: string } = {
    Normal: "bg-gray-400 text-black",
    Fire: "bg-red-500 text-white",
    Water: "bg-blue-500 text-white",
    Electric: "bg-yellow-400 text-black",
    Grass: "bg-green-500 text-white",
    Ice: "bg-blue-300 text-black",
    Fighting: "bg-red-700 text-white",
    Poison: "bg-purple-500 text-white",
  }
}
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    Ground: "bg-yellow-700 text-black",
    Flying: "bg-indigo-400 text-white",
    Psychic: "bg-pink-400 text-white",
    Bug: "bg-lime-500 text-black",
    Rock: "bg-yellow-600 text-white",
    Ghost: "bg-purple-700 text-white",
    Dragon: "bg-purple-600 text-white",
    Dark: "bg-gray-800 text-white",
    Steel: "bg-gray-600 text-white",
    Fairy: "bg-pink-300 text-black",
  }

  return colors[type] || "bg-gray-500 text-white"
}

// Returns the color class for the HP bar based on current and max HP
const getHPColor = (currentHP: number, maxHP: number): string => {
  const percentage = (currentHP / maxHP) * 100
  if (percentage > 50) return "bg-green-500"
  if (percentage > 25) return "bg-yellow-500"
  return "bg-red-500"
}

// Returns the icon for a Pokémon type
const getTypeIcon = (type: string): JSX.Element => {
  const iconMap: { [key: string]: JSX.Element } = {
    Normal: <Circle className="w-4 h-4" />,
    Fire: <Flame className="w-4 h-4" />,
    Water: <Droplet className="w-4 h-4" />,
    Electric: <Zap className="w-4 h-4" />,
    Grass: <Leaf className="w-4 h-4" />,
    Ice: <Snowflake className="w-4 h-4" />,
    Fighting: <Swords className="w-4 h-4" />,
    Poison: <Skull className="w-4 h-4" />,
    Ground: <Globe className="w-4 h-4" />,
    Flying: <Bird className="w-4 h-4" />,
    Psychic: <Eye className="w-4 h-4" />,
    Bug: <Bug className="w-4 h-4" />,
    Rock: <Mountain className="w-4 h-4" />,
    Ghost: <Ghost className="w-4 h-4" />,
    Dragon: <Mountain className="w-4 h-4" />,
    Dark: <Moon className="w-4 h-4" />,
    Steel: <Shield className="w-4 h-4" />,
    Fairy: <Sparkles className="w-4 h-4" />,
    Stellar: <Star className="w-4 h-4" />,
  }

  return iconMap[type] || <HelpCircle className="w-4 h-4" />
}

// Sets the currently displayed Opponent Pokémon based on the switching state
const displayedOpponent = isSwitchingOpponent
  ? switchDirectionOpponent === "in"
    ? switchingInOpponent

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        : switchingOutOpponent
        : opponentTeam[activeOpponentIndex];

    // Sets depending on if the opponent is switching out a dead Pokémon
    const isOpponentFainting = isSwitchingOpponent && switchDirectionOpponent ===
    "out";

    // Forces the displayed HP to 0 if the opponent is fainting
    const displayedCurrentHP = isOpponentFainting ? 0 :
    displayedOpponent?.currentHP ?? 0;
    const displayedMaxHP = displayedOpponent?.maxHP ?? 1;

    return (
      <div className="min-h-screen bg-gradient-to-br from-slate-50 to-slate-100
    dark:from-slate-900 dark:to-slate-800">
        <div className="container mx-auto px-2 py-4">
            <div className="max-w-3xl mx-auto relative">
                {/* Opponent Team Status - Top Left */}
                <div className="absolute top-4 left-4 z-10">
                    <Card className="bg-white/90 dark:bg-slate-800/90
    backdrop-blur-sm border-0 shadow-lg">
                        <CardContent className="p-2">
                            <div className="text-xs text-muted-foreground mb-
    1">Opponent</div>

                            <div className="flex gap-1">
                                {/* Display for each Member on opponents team
    a Pokeball
                                and greys out when the representative
    Pokémon fainted */}
                                {opponentTeam.map((pokemon, index) => (
                                    <SimplePokeballIcon
                                        key={index}
                                        size={16}
                                        className={`transition-all duration-
    300 ${pokemon.currentHP > 0
                                                ? "text-red-500 hover:scale-110"
                                                : "text-gray-400 dark:text-gray-
    600 opacity-50"}
                                    `}
                                )}
                                </div>
                            )}
                        </div>
                    </CardContent>
                </Card>
            </div>

            {/* Battle Arena */}
            <Card className="shadow-2xl border-0 bg-white/80 dark:bg-
    slate-800/80 backdrop-blur-sm mb-3">
                <CardContent className="p-0">
                    <div
                        className="relative min-h-[350px] rounded-t-lg
    overflow-hidden bg-cover bg-center bg-no-repeat"
                        style={{

```

```

// Set the background image for the
battlefield

    backgroundImage: `url(${battlefieldImage})`,
    backgroundSize: "cover",
    backgroundPosition: "center",
  }}
>
  { /* Overlay for better readability */ }
  <div className="absolute inset-0 bg-black/10">

</div>

  { /* Opponent Pokemon */ }
  <div className="relative z-10 flex justify-end pt-
6 pr-6 mb-6">

    <div className="flex items-center gap-3">
      { /* Animate the opponent's Pokémon
switching in and out as well as attacking
are active it will only show the pokemon sprite */ }
      <AnimatePresence mode="wait">
        {isSwitchingOpponent &&
switchingOutOpponent?.id ===
displayedOpponent?.id &&
switchDirectionOpponent === "out"
? (
    <motion.div
      key="opponent-out"
      initial={{ opacity: 1, y: 0 }}
      animate={{ opacity: 0, y: -50
}}

      exit={{ opacity: 0 }}
      transition={{ duration: 0.5 }}
      className="mt-8"
    >
      <img
        src=
{displayedOpponent?.sprite || "/placeholder.svg"}
        alt=
{displayedOpponent?.name}
        className="w-32 h-32
object-contain drop-shadow-2xl"
      />
    </motion.div>
  ) : isSwitchingOpponent &&
switchDirectionOpponent === "in"
&&
switchingInOpponent?.id ===
displayedOpponent?.id ? (
    <motion.div
      key="opponent-in"
      initial={{ opacity: 0, scale:
0.5 }}
      animate={{ opacity: 1, scale:
1 }}

```

```

        exit={{ opacity: 1 }}
        transition={{ duration: 0.5 }}
        className="mt-8"
      >
      <img
        src=
{displayedOpponent?.sprite || "/placeholder.svg"}
        alt=
{displayedOpponent?.name}
        className="w-32 h-32
object-contain drop-shadow-2xl"
      />
    </motion.div>
  ) : (
    <motion.div
      key="opponent-normal"
      initial={{ opacity: 1 }}
      animate={{
        y: isAnimating &&
!isPlayerTurn ? [0, -10, 0] : 0,
      }}
      transition={{
        duration: 0.5,
        repeat: isAnimating &&
!isPlayerTurn ? 1 : 0,
      }}
      className="mt-8"
    >
      <img
        src=
{displayedOpponent?.sprite || "/placeholder.svg"}
        alt=
{displayedOpponent?.name}
        className="w-32 h-32
object-contain drop-shadow-2xl"
      />
    </motion.div>
  )}
</AnimatePresence>

/* Display the opponent's Pokémon card
with HP and types */
<Card className="mb-2 bg-white/95 dark:bg-
slate-800/95 backdrop-blur-sm border-0 shadow-lg">
  <CardContent className="p-3">
    <div className="flex items-center
gap-2 mb-1">
      <div>
        /* Display the opponent's
Pokémon name, level, and types */
        <div className="font-bold
text-base">{displayedOpponent?.name}</div>
        <div className="text-xs
text-muted-foreground">

```

```

                                Lv.
{displayedOpponent?.lvl}

                                </div>
                                </div>
                                <div className="flex gap-2">

{displayedOpponent?.types.map((type) => (

                                <Badge
                                    key={type}
                                    className=

                                {`${getTypeColor(type)} text-white border-0 shadow-md`}
                                >
                                    {type}
                                </Badge>
                            ))}
                                </div>
                                </div>

                                <div className="w-40">
                                <div className="flex justify-

between text-xs mb-1">

                                {/* Display the opponent's

HP with current and max HP */}

                                <span>HP</span>
                                <span>

{displayedCurrentHP}/{displayedMaxHP}

                                </span>
                                </div>
                                <Progress
                                    value={
                                        ((displayedCurrentHP)

/ (displayedMaxHP)) * 100

                                    }
                                    className="h-2 shadow-sm"
                                    indicatorClassName=

{getHPColor(

displayedOpponent?.currentHP ?? 0,

displayedOpponent?.maxHP ?? 1

                                )}
                                />
                                </div>
                                </CardContent>
                                </Card>
                                </div>
                                </div>

                                {/* Player Pokemon */}
                                <div className="relative z-10 flex justify-start

pl-6 pb-6">

                                <div className="flex items-center gap-3">
                                <Card className="bg-white/95 dark:bg-

```



```

    slate-800/95 backdrop-blur-sm border-0 shadow-lg">
      <CardContent className="p-3">
        <div className="flex items-center
gap-2 mb-1">
          <div className="flex gap-2">
            {/* Display the player's
Pokémon types as badges */}
            {playerPokemon.types.map((type) => (
              <Badge key={type}
className={` ${getTypeColor(type)} text-white border-0 shadow-md`} >
                {type}
              </Badge>
            ))}
          </div>
          <div>
            {/* Display the player's
Pokémon name and level */}
            <div className="font-bold
text-base">{playerPokemon.name}</div>
            <div className="text-xs
text-muted-foreground">Lv.{playerPokemon.lvl}</div>
          </div>
        </div>
        <div className="w-40">
          <div className="flex justify-
between text-xs mb-1">
            {/* Display the player's
Pokémon HP with current and max HP */}
            <span>HP</span>
            <span>
              {playerPokemon.currentHP}/{playerPokemon.maxHP}
            </span>
          </div>
          <Progress
            value=
              {(playerPokemon.currentHP / playerPokemon.maxHP) * 100}
            className="h-2 shadow-sm"
            indicatorClassName=
              {getHPColor(playerPokemon.currentHP, playerPokemon.maxHP)}
          />
        </div>
      </CardContent>
    </Card>
    {/* Animate the player's Pokémon switching
in and out as well as attacking
if none of those Rendering Variables
are active it will only show the pokemon sprite */}
    <AnimatePresence mode="wait">
      {isSwitchingPlayer &&
switchingOutPlayer?.id === playerPokemon.id && switchDirectionPlayer === "out" ? (
        <motion.div
          key="player-out"

```

```

    initial={{ opacity: 1, y: 0 }}
    animate={{ opacity: 0, y: 50

  }}

  exit={{ opacity: 0 }}
  transition={{ duration: 0.5 }}
  >
  <img
    src=
    {playerPokemon.sprite_back || "/placeholder.svg"}
    alt={playerPokemon.name}
    className="w-32 h-32
  object-contain drop-shadow-2xl"

  />
</motion.div>
) : isSwitchingPlayer &&
switchingInPlayer &&
switchDirectionPlayer === "in" &&
switchingOutPlayer?.id ===

playerPokemon.id ? (

  0.5 }}

  1 }}

  <motion.div
    key="player-in"
    initial={{ opacity: 0, scale:

    animate={{ opacity: 1, scale:

    exit={{ opacity: 1 }}
    transition={{ duration: 0.5 }}
  >
    <img
      src=
      {switchingInPlayer.sprite_back || "/placeholder.svg"}
      alt=
      {switchingInPlayer.name}

      className="w-32 h-32
    object-contain drop-shadow-2xl"

    />
  </motion.div>
) : (
  <motion.div
    key="player-normal"
    initial={{ opacity: 1 }}
    animate={{
      y: isAnimating &&

    }}
    transition={{
      duration: 0.5,
      repeat: isAnimating &&

    }}
  >
    <img
      src=
      {playerPokemon.sprite_back || "/placeholder.svg"}

```

```

                                alt={playerPokemon.name}
                                className="w-32 h-32"

object-contain drop-shadow-2xl"

                                />
                            </motion.div>
                        )}
                    </AnimatePresence>
                </div>
            </div>
        </div>
    </CardContent>
</Card>

{/* Battle Interface with Team Status */}
<div className="relative">
    {/* Player Team Status - Right Side */}
    <div className="absolute -right-20 top-4 z-10">
        <Card className="bg-white/90 dark:bg-slate-800/90
backdrop-blur-sm border-0 shadow-lg">
            <CardContent className="p-2">
                <div className="text-xs text-muted-foreground
mb-1 text-center">Your Team</div>

                <div className="flex flex-col gap-1">
                    {/* Display for each Member on player's
team a Pokeball
                                that greys out when the representativ
Pokemon fainted */}

                    {playerTeam.map((pokemon, index) => (
                        <span
                            key={index}
                            onClick={() => {
                                }}
                            className="inline-block"
                            style={{ cursor: pokemon.currentHP
> 0 && pokemon.id !== playerPokemon.id ? "pointer" : "default" }}
                            >
                                <SimplePokeballIcon
                                    size={18}
                                    className={`transition-all
duration-300 ${pokemon.currentHP > 0
                                ? pokemon.id ===
playerPokemon.id
                                ? "text-green-500
                                : "text-red-500
                                : "text-gray-400
                                }}`
                                />
                            </span>
                        ))}
                    </div>
                </CardContent>
            </div>
        </div>
    </div>

```

```

        </Card>
      </div>

      <Card className="shadow-xl border-0 bg-white/90 dark:bg-slate-800/90 backdrop-blur-sm">
        <CardContent className="p-4">
          {/* Battle Text */}
          <Card className="bg-slate-100/80 dark:bg-slate-700/80 backdrop-blur-sm border-0 shadow-sm mb-4">
            <CardContent className="py-2 px-3">
              {/* Display the battle text, which updates
based on the current action */}
              <p className="text-base font-medium min-h-[24px]">{battleText}</p>
            </CardContent>
          </Card>

          {/* Main Menu */}
          {isPlayerTurn &&
            !isAnimating &&
            !isSwitchingPlayer &&
            playerPokemon.currentHP > 0 &&
            opponentPokemon.currentHP > 0 &&
            currentMenu === "main" && (
              <div className="grid grid-cols-2 gap-3">
                { /* Main menu with options for
attack, Pokémon, items, and run */}

                <Button
                  onClick={() =>
handleMenuSelect("attack")}

                  variant="outline"
                  className="h-14 text-left flex
items-center justify-start gap-3 hover:bg-blue-50/80 dark:hover:bg-slate-700/80
border-slate-200 dark:border-slate-600 bg-white/60 dark:bg-slate-800/60 backdrop-
blur-sm shadow-md hover:shadow-lg transition-all duration-200"
                >
                  <div className="p-2 rounded-lg bg-
gradient-to-r from-red-500 to-orange-500 shadow-sm">
                    <Swords className="h-4 w-4
text-white" />
                  </div>
                  <span className="font-semibold
text-base">Attack</span>
                </Button>

                <Button
                  onClick={() =>
handleMenuSelect("pokemon")}

                  variant="outline"
                  className="h-14 text-left flex
items-center justify-start gap-3 hover:bg-blue-50/80 dark:hover:bg-slate-700/80
border-slate-200 dark:border-slate-600 bg-white/60 dark:bg-slate-800/60 backdrop-
blur-sm shadow-md hover:shadow-lg transition-all duration-200"
                >

```

```

                                <div className="p-2 rounded-lg bg-
gradient-to-r from-green-500 to-emerald-500 shadow-sm">
                                <User2 className="h-4 w-4
text-white" />
                                </div>
                                <span className="font-semibold
text-base">Pokémon</span>
                                </Button>

                                <Button
                                onClick={() =>
handleMenuSelect("items")}

                                variant="outline"
                                className="h-14 text-left flex
items-center justify-start gap-3 hover:bg-blue-50/80 dark:hover:bg-slate-700/80
border-slate-200 dark:border-slate-600 bg-white/60 dark:bg-slate-800/60 backdrop-
blur-sm shadow-md hover:shadow-lg transition-all duration-200"
                                >
                                <div className="p-2 rounded-lg bg-
gradient-to-r from-blue-500 to-cyan-500 shadow-sm">
                                <Package className="h-4 w-4
text-white" />
                                </div>
                                <span className="font-semibold
text-base">Items</span>
                                </Button>

                                <Button
                                onClick={() =>
handleMenuSelect("run")}

                                variant="outline"
                                className="h-14 text-left flex
items-center justify-start gap-3 hover:bg-blue-50/80 dark:hover:bg-slate-700/80
border-slate-200 dark:border-slate-600 bg-white/60 dark:bg-slate-800/60 backdrop-
blur-sm shadow-md hover:shadow-lg transition-all duration-200"
                                >
                                <div className="p-2 rounded-lg bg-
gradient-to-r from-gray-500 to-slate-600 shadow-sm">
                                <LogOut className="h-4 w-4
text-white" />
                                </div>
                                <span className="font-semibold
text-base">Run</span>
                                </Button>
                                </div>
                                )}

                                {/* Attack Menu */}
                                {isPlayerTurn &&
                                !isAnimating &&
                                !isSwitchingPlayer &&
                                playerPokemon.currentHP > 0 &&
                                opponentPokemon.currentHP > 0 &&
                                currentMenu === "attack" && (

```

```

        <>
        <div className="grid grid-cols-2 gap-3
mb-3">
            { /* Display the player's Pokémon
moves with type icons and PP as well as Power */}
            {playerPokemon.moveset.map((move,
index) => {
                const iconElement =
                const currentPP =
                const isDisabled = currentPP
                <= 0

                return (
                    <Button
                        key={index}
                        onClick={() => {

                            console.log("Button clicked");

                            console.log("playerPokemon:", playerPokemon);

                            console.log("opponentPokemon:", opponentPokemon);

                            const
                            isPlayerFaster = playerPokemon.speed > opponentPokemon.speed;

                            console.log("isPlayerFaster:", isPlayerFaster);

                            if (!isDisabled) {
                                if
                                (isPlayerFaster) {

                                    console.log("handlePlayerMove aufgerufen");

                                    handlePlayerMove(move);

                                } else {

                                    console.log("handleOpponentMove aufgerufen");

                                    handleOpponentMove(move);

                                }
                            }
                        }}
                        variant="outline"
                        disabled={isDisabled}
                        className={`h-14 text-
left flex items-center justify-start gap-3
cursor-not-allowed"
                        : "hover:bg-
blue-50/80 dark:hover:bg-slate-700/80"
                    }
                    border-slate-200

```

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```

return (
  // Display each Pokémon in the
  team with the sprite on top of a Pokeball

  // If the Pokémon is
  selectable, it can be clicked to switch and the image scales up on hover
  <motion.div
    key={index}
    whileHover={isSelectable ?
    { scale: 1.05 } : {}}
    onClick={() =>
      isSelectable && handlePokemonSelect(pokemon)}
    className={`flex flex-col
      items-center justify-center p-3 rounded-lg shadow-md transition-all duration-200
      ${pokemon.currentHP === 0
        ? "opacity-50 cursor-
        not-allowed"
        : pokemon.id ===
        playerPokemon.id
        ? "bg-green-100/80
        dark:bg-green-900/30 border border-green-300 dark:border-green-700"
        : "cursor-pointer
        bg-white/80 dark:bg-slate-800/80 hover:bg-blue-50/80 dark:hover:bg-blue-900/20"
        }`}
    >
    <div className="relative
      w-20 h-20">
      <SimplePokeballIcon
        size={80}
        className=
        {pokemon.id === playerPokemon.id ? "text-green-500" : "text-red-500"}
      />
      <img
        src=
        {pokemon.sprite || "/placeholder.svg"}
        alt={pokemon.name}

        className="absolute top-1/2 left-1/2 -translate-x-1/2 -translate-y-1/2 w-12 h-12
        object-contain"
      />
    </div>
    {/* Display the Pokémon's
    name and HP bar */}
    <span className="text-sm
      font-medium mt-2">{pokemon.name}</span>

    <div className="w-full mt-
    1">
      <Progress
        value=
        {(pokemon.currentHP / pokemon.maxHP) * 100}
        className={`h-1.5
          ? "bg-green-
          200 dark:bg-green-800"
          :

```



```

pokemon.currentHP / pokemon.maxHP > 0.25
? "bg-
yellow-200 dark:bg-yellow-800"
: "bg-red-
200 dark:bg-red-800"
}}
/>
</div>
<span className="text-xs
text-muted-foreground mt-1">
{pokemon.currentHP}/{pokemon.maxHP} HP
</span>
</motion.div>
);
)}}
</div>
{/* Back button to return to the main menu
*/}

<Button
  onClick={() => {
    if (playerPokemon.currentHP > 0) {
      setCurrentMenu("main")
    }
  }}
  variant="outline"
  className="w-full text-sm h-8 bg-
slate-100 dark:bg-slate-700 hover:bg-slate-200 dark:hover:bg-slate-600"
  disabled={playerPokemon.currentHP ===
0}
>
  {playerPokemon.currentHP === 0 ?
"Choose a Pokémon" : "Back"}
</Button>
</>
)}

{/* Run Confirmation Menu */}
{/* Display Menu to make sure that the player
wants to run away */}

{isPlayerTurn &&
!isAnimating &&
!isSwitchingPlayer &&
playerPokemon.currentHP > 0 &&
opponentPokemon.currentHP > 0 &&
showRunConfirmation && (
  <div className="space-y-4">
    <div className="text-center">
      <p className="text-lg font-
semibold mb-4">Are you sure you want to give up?</p>
    </div>
    <div className="grid grid-cols-2 gap-
3">
      { /* Buttons to confirm or cancel

```

```

the run action
Confirmation ends the battle
while cancellation returns to the main menu */
}

<Button
  onClick={handleRunConfirm}
  variant="outline"
  className="h-14 text-center
flex items-center justify-center gap-3 hover:bg-red-50/80 dark:hover:bg-red-900/20
border-red-200 dark:border-red-600 bg-white/60 dark:bg-slate-800/60 backdrop-blur-
sm shadow-md hover:shadow-lg transition-all duration-200"
>
  <div className="p-2 rounded-lg
bg-gradient-to-r from-red-500 to-red-600 shadow-sm">
    <LogOut className="h-4 w-4
text-white" />
  </div>
  <span className="font-semibold
text-base text-red-600 dark:text-red-400">Yes, give up</span>
</Button>
<Button
  onClick={handleRunCancel}
  variant="outline"
  className="h-14 text-center
flex items-center justify-center gap-3 hover:bg-green-50/80 dark:hover:bg-green-
900/20 border-green-200 dark:border-green-600 bg-white/60 dark:bg-slate-800/60
backdrop-blur-sm shadow-md hover:shadow-lg transition-all duration-200"
>
  <div className="p-2 rounded-lg
bg-gradient-to-r from-green-500 to-green-600 shadow-sm">
    <Shield className="h-4 w-4
text-white" />
  </div>
  <span className="font-semibold
text-base text-green-600 dark:text-green-400">
    No, keep fighting
  </span>
</Button>
</div>
</div>
)}}

{/* Waiting State */}
{/* Display a waiting state when it's not the
player's turn or when an animation is in progress */}
{(!isPlayerTurn || isAnimating ||
isSwitchingPlayer) &&
  playerPokemon.currentHP > 0 &&
  opponentPokemon.currentHP > 0 &&
  !showRunConfirmation &&
  currentMenu !== "pokemon" && (
    <div className="text-center py-6">
      <div className="inline-flex items-

```

```

center gap-2 text-muted-foreground">
                                <div className="w-2 h-2 bg-blue-
500 rounded-full animate-pulse"></div>
                                <div className="w-2 h-2 bg-blue-
500 rounded-full animate-pulse delay-75"></div>
                                <div className="w-2 h-2 bg-blue-
500 rounded-full animate-pulse delay-150"></div>
                                <span className="ml-2">
                                  {isSwitchingPlayer
                                    ? "Switching Pokémon..."
                                    : isAnimating
                                      ? "Battle in
progress..."
                                      : "Opponent's
turn..."}
                                </span>
                              </div>
                            </div>
                          )}

                          {/* Game Over State */}
                          {/* Display a button to return to the teambuilder
if either team has no Pokémon left */}
                          {(playerTeam.every((p) => p.currentHP === 0) ||
opponentTeam.every((p) => p.currentHP === 0)) && (
                            <div className="text-center">
                              <Button
                                onClick={() => onEndofBattle()}
                                className="bg-gradient-to-r from-
green-500 to-emerald-600 hover:from-green-600 hover:to-emerald-700 text-white
border-0 shadow-lg hover:shadow-xl transition-all duration-200 px-6 py-2 text-
base"
                              >
                                <ArrowLeft className="h-4 w-4 mr-2" />
                                Back to Teambuilder
                              </Button>
                            </div>
                          )}
                        </CardContent>
                      </Card>
                    </div>
                  </div>
                </div>
              </div >
            )
          }

```